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Published in a volume of studies on Puerto Rico, this extensive report discusses policies and trends in the Puerto Rican Educational System, and describes its administrative and organizational characteristics. Numerous programs, such as an English program for adults and a scholarship program, are also described. One section is devoted to significant factors in the development of education in Puerto Rico. Statistical data are supplied on the present and projected population in Puerto Rico, school enrollment, and school retention rates. (LB)

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SIGNIFICANT FACTORS IN THE DEVELOPMENT OF EDUCATION IN PUERTO RICO

by

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I. SOME SIGNIFICANT FACTORS IN THE DEVELOPMENT OF EDUCATION IN PUERTO RICO [1]

INTRODUCTION

It is easy and possible to write a report about education in Puerto Rico and limit its content to comments on official documents, to written objectives, stated purposes, constitutional provisions, prescribed courses, and the usual problems facing education at a given point. But education cannot be adequately discussed in isolation, in terms of mere expressions of high sounding aims and purposes; the frame of reference of the historical, social, economic, geographic and political factors that affect it must be taken into account. There must be objective appraisal, sound evaluation, and knowledgeable understanding of the milieu. It would be helpful to look at education as one of the most potent means of uplifting people and to single out and examine some of the significant factors which have affected and conditioned its development, considering both the attainments it has achieved and the shortcomings that have hindered it, in order to decide what reorientations are inevitable and which challenges we face, to make viable what remains to be accomplished.

A noble point of departure could be President John Fitzgerald Kennedy's words to the U.S. Congress on January 29, 1963:

> Education is the keystone in the arch of freedom and progress. Nothing has contributed more to the enlargement of this Nation's strength and opportunities than our traditional system of free, universal elementary and secondary education, coupled with widespread availability of college education.
>
> For the individual, the doors to the schoolhouse, to the library, and to the college lead to the richest treasures of our open society: to the power of knowledge—to the training and skills necessary for productive employment—to the wisdom, the ideals, and the culture which enrich life—and to the creative, self-disciplined understanding of society needed for good citizenship in today's changing and challenging world.
>
> A free nation can rise no higher than the standard of excellence set in its schools and colleges. Ignorance and illiteracy, unskilled workers and school dropouts—these and other failures of our educational system breed failures in our social and economic system: delinquency, unemployment, chronic dependence, a waste of human resources, a loss of productive power and purchasing power, and an increase in tax-supported benefits.[2]

Years before Governor Luis Muñoz Marín had expressed similar inspiring thoughts:

> There can be no greater emergency than that of providing education for those whom nature has endowed with power of mind and spirit * * * I earnestly believe that except for the most pressing human wants, education shall constitute our supreme consumption, not only in Puerto Rico and America, but in every part of the world. I speak of education not in the sense of a ration which is merely served to children and youngsters. I mean education which

> is fed to all through a lifetime as an urgent need and a source of joy for the spirit. I refer to that form of education which will endow democracies with a deeper sense of their true significance. This is the only way to conquer poverty and to achieve a state of undisturbed peace throughout the world.[3]

THE NEED FOR A PHILOSOPHY OF EDUCATION

A philosophy of education serves as guidelines to a school system. It provides a body of ideas about man, society and the school; ideas which in turn determine and affect the curriculum which regulates the educational processes. It offers avenues for accomplishment and points to the desirable results. Such a philosophy of education should be based on the culture of the community where it is to operate and should know the culture so as to be able to serve it effectively, preserve, enrich, or change some aspects of it when advisable after thorough evaluation of the rationality of such changes. Philosophy may serve to organize the results of the various sciences to show their relationships, or it may structure a system of principles to guide the practical affairs of man; in the specific sphere of education, to guide policies and programs. These principles are the foundations of all knowledge. They give man an integrated, unified view of the world in which he lives, and as they are derived from the philosophical processes they give the person increased ability to think clearly and logically.

A school system without a philosophy of education is limited in the sense that the teachers, students and directors are not able to establish a rational conception of their community or of the universe through an autoanalysis of their own appraisal functions, be they theoretical or practical.

Especially in Puerto Rico, where material civilization has changed the external conditions of living so rapidly that essential beliefs and ideas have become tangled and confused, a sound, workable philosophy of education is necessary. Its formulation should no longer be delayed, because "the people of Puerto Rico, and especially the teaching profession of Puerto Rico, will move forward effectively in their great educational enterprise only as they understand the conditions which have brought about these strains between belief and practice, these conflicts among ideas, and this economic, social, political, religious and moral confusion which confronts them." [4]

The school is the agent used by society, directly or indirectly, to preserve and transmit its culture, to explain, interpret, increase, modify or criticize it; to change it if need be or to integrate and give significance to it when divided, in disharmony or in conflict, or when it is subjected to tension. People need to understand, evaluate and criticize the processes of acculturation; processes which are constantly, indiscriminately and obviously taking place. Each culture molds its people according to its own norms, establishing national differences. That is why, as is so well explained by George S. Counts, "education is always a function of some particular civilization at some particular time in history";[5] or as Theodore Brameld prefers to say: "Every culture possesses some kind of value orientation, just as every culture possesses some kind of configuration."[6] But we have been shifting educational processes and programs, as if to avoid giving reality to a reasonable philosophy of education; processes which are not in keeping with our culture and the needs of association in common citizenship with the United States. These shifts have been made at the discretion of all-powerful commissioners or secretaries of education or for political expediency.

This is where confusion creeps into the interpretation of the educational and cultural processes in Puerto Rico. The fact that we subscribe, endorse, and live according to the most well-known principles and values of western civilization does not deny our particular way of being, our particular reality in history, in personality, in customs and geography. It does not deny either the processes of acculturation, assimilation and confusion that have and are taking place. Thus, although some of our problems are similar to those of other peoples, we maintain an integrity which makes us unique in many respects.[7] This was stressed by the International Institute of Teachers College in their *Survey of the Public Educational System of Porto Rico:* "The Puerto Rican people have a unique personality that should be preserved and their culture should be developed and passed on through a curriculum peculiar to it."[8] This uniqueness has been denied in the past and is still denied by some historians and social scientists.[9]

Our school system has frequently confused procedures, methods, techniques and political expediency with principles, values and philosophy. That has been the glaring case of gearing the school system predominantly and persistently to a policy of Americanization, extension (quantitatively) of the school system, and the teaching of English. Or as exemplified by the letter sent by President Franklin D. Roosevelt in 1937 to Commissioner José M. Gallardo in which he made, according to the way Brameld summarizes them, three revealing statements:

1. "It is an indispensable part of the American policy that the coming generation of American citizens in Puerto Rico grow up with complete facility in the English tongue. It is the language of our Nation."

2. But "it is obvious that they (Puerto Ricans) always will and should retain facility in the tongue of their inherited culture, Spanish."

3. Therefore it is necessary "that the American citizens of Puerto Rico should profit from their unique geographical situation and the

unique historical circumstance which has brought to them the blessings of American citizenship by becoming bilingual." [10]

A language policy, politically combined with Americanization, has traditionally substituted for a philosophy of education. In the process the genuine interest of the Puerto Ricans in learning the best English possible has suffered, and not infrequently an image of friction and force has emerged.

More recently the concept that there is no need to formulate philosophical principles for our educational system has been developed. These will emerge as we advance, in fact they will be part of the advancement. Again, this is confusing the changing reality of a dynamic society with movement for the love of locomotion. The word of caution formulated by Logan Wilson is pertinent. "As changes take place, however, we shall need to remind ourselves constantly that doing things differently does not necessarily mean doing them better." [11] It is precisely in a dynamic and changing community, where two cultures are interacting constantly, where old values are challenged, where new values are uncertain, where ambivalence on unresolved issues menaces the security of people; that philosophical guidelines should be an essential component of the educational system, and for that matter, of the culture and society in general. A school system in a changing society cannot be a drifting ship; it moves but not where it is necessary to go.

This is where philosophy, a unifying force, a supplier of important background and points of reference upon which to think clearly and logically, is an invaluable resource for guidance on spiritual and practical affairs. This is what our school system has lacked and still lacks. This explains, in part, what has been characterized as the staggering "zig-zags of [sixty-seven] years."

When procedures, methodological and technical aspects of an educational problem, are turned into a political football, the tasks of the schools are unnecessarily complicated. "In a highly political society such as Puerto Rico, where it sometimes seems as though nothing but politics were important, one encounters among the most thoughtful intellectuals an insistence upon politicizing all issues; * * * but we would argue that to the extent that political considerations have not been allowed to dominate all issues and have been rendered secondary in many of the important processes of change, social energies appropriate to orderly social change have been more effectively utilized. At the same time, political energies which might otherwise be evoked under more dramatic circumstances of social change have been diminished and rendered relatively irrelevant." [12]

The best way to help the people cope with rapid change is to give them more opportunities for education; education with a purpose, with clear but flexible philosophical tenents. This is not to be interpreted as clinging to outmoded values and customs, neither does it mean assimilation of everything exotic, foreign or coming from an economically dominant culture.[13]

Regardless of these changes in orientation, of the movements for the pleasure of locomotion, of the clear confusion of procedure with principles, there is no denying the fact that "the single most effective reducer of past inequalities has been the system of free public education." [14] In our efforts of development, exemplified by Operation Bootstrap, there is ground for optimism and recognition of a task well done but also a word of warning is pertinent and necessary for those responsible for the future destiny of this society: "* * * education works in two apparently opposite ways in Puerto Rican society. On the one hand, it is the single best indicator of differential social position, from which a host of other differences result. It is, in short, the most effective stratifier or producer of class differences. On the other hand, and for the very same reasons, education is the single most effective way to reduce the distance among existing classes. The educational system is the most effective point of leverage in the total social system." [15] (The facts that are included in this report will support this statement.) As scientific knowledge is organized to show relationships, the clearer the truths are revealed, the more understandably the guiding principles are stated and explained, the more effectively the values underlying knowledge are presented; the better the position of strength of a culture will be to preserve and enrich its own heritage and adapt and assimilate values from other cultures, enriching in the process the lives of the people.

To cope with what social anthropologists call major social changes (movement from an agricultural to an industrial society, from a rural to an increasing urban society, etc.), with the emergent new class structures, with tensions and dualities, with acculturation and at times assimilation of certain forms and values, with future opportunities of uplift and release, we need to continue opening new avenues for more, better, and broader education to utilize the diversity of talents, interests, and motivations of the individuals that education must serve. This is probably one of the best ways, if not the best, of arriving at a state of mental serenity, a true aim of educational philosophy.

We must remember that by having good educational planning, and that even by drifting, "we are triggering sequences of events which may reach far into the future."

Regardless of this shortcoming in orientation, public education in Puerto Rico has been free, egalitarian, democratic (although its highly centralized structure is, in a sense, a negation of democratic organization and function), coeducational, and secular. It has been inspired by an unquenchable zeal to view people as individuals, as human beings and not as objects of exploitation. It has had a strong faith—at times even a frustrating faith—in education as the key to the solution of all imaginable problems. In reality, education has been the principal agent of fermentation, release, and uplift. But there should be no denying that there is still a long, long way to go and a need for a definition of goals, though with adequate flexibility; goals closely tied to the political issue. (The body of this report will attest to our generalizations on philosophy and to the role played by education in our society.)

THE PUERTO RICAN SCHOOLS DURING THE SPANISH REGIME [16]

During most of its history the island was a colony, first of Spain and later of the United States, and its destiny was linked to the political movements and changes of both countries. In educational matters the island has copied, without much adaptation, first the educational system of Spain and then that of the United States. During the 400 years of Spanish rule in Puerto Rico, the philosophy implicit in the educational system was to make Puerto Ricans loyal subjects to the Spanish crown and obedient sons of the church. Education was looked upon—at least in practice—as a privilege of the upper classes and not as a right of each subject. It should be pointed out that the concept of a free, universal and compulsory public education, prevailing today in democratic countries, took a long time to develop.

It is true the royal orders sent to the island showed the concern of the Spanish rulers for the spiritual and temporal education of the Indians and later of the Africans imported to the island as slaves and, in any case, that of the sons of Spaniards and Puerto Ricans. But the royal decrees were one thing and the interpretations by the governors sent by the kings to rule the colony were quite a different thing. However, it must be made clear, while not justifying the educational evils that the island suffered for more than 400 years, that education in the colony, both as to its philosophy and the opportunities it offered, was not very different from education in Spain or in most of the countries in the New World.

During the centuries of Spanish conquest and colonization, education was almost entirely a job of the church although there were also a few private schools both secular and religious. At the elementary and secondary levels, the educational institution par excellence was the parochial school.

Lack of schools was not caused, to any important extent, by the indolence of Governors or church officials, but by the lack of means that was always a characteristic of the island's economy during the period of Spanish colonialism and, until recently, under the American Government.

The prevailing methodological practice in all schools—parochial, public, and/or private—was the rote memorization of curriculum subjects. Evaluation was limited to measurement through yearly tests of the mastery of the knowledge acquired with the help of mnemonic devices. Respect for the teacher was proverbial and obedience was a rule often reinforced with corporal punishment, a practice then generally accepted. The curriculum, meager and foreign to the surrounding reality, eminently classical and theoretical, gave importance almost exclusively to subject matter. At the elementary level, it consisted of the fundamentals of reading and writing, arithmetic, Spanish history and geography, religion, and—for girls—needlework.

EDUCATION AT THE END OF THE SPANISH RULE

At the end of the Spanish rule, there were on the island 380 elementary schools for boys, 138 for girls, 26 secondary schools, and one school for adults. In all, these 545 schools served only 47,861 students. From 79 to 85 percent of the total population of the island was illiterate. We must make it clear, as Cuesta Mendoza says,[17] that the educational task of the school during the Spanish colonial period was shared by the home and the church and there were frequent cases of families in which the children studied under private tutors. Usually the father, the mother, or one of the older children acted as teacher for the family. No census showed the number of such persons who received private instruction at home.

Vocational instruction was mainly in charge of the parents. As a general rule, the eldest son followed either his father's occupation or one which his father chose for him; the other children, especially if the family was of limited economic means, received instruction under the apprentice system that prevailed at that time. Girls' education, which in past centuries never received very much attention in any country, was in the mothers' charge at home and its purpose was to prepare girls to be good wives, mothers, and housekeepers. At schools, girls were taught reading, writing, and arithmetic, but most importance was given to domestic arts (especially needlework), religion, and etiquette.

At the end of the Spanish regime in Puerto Rico, the island had developed an educational system based upon public and private schools, secular and religious, in which boys and girls were taught separately. In spite of acknowledged limitations, the country had schools in every municipality.[18]

THE FIRST FOUR DECADES OF THE 20TH CENTURY: THE NORTH AMERICAN INFLUENCE

With the change of government in the island in 1898, the North Americans became immediately interested in the education of the Puerto Rican people. However, they did not make a study of the educational conditions of the island which was broad enough to determine if there was a basis upon which the foundations of an educational system, in harmony with the needs of the country, could be laid.

> The educators who organized the system of public education in Puerto Rico after the American occupation were entirely inexperienced in colonial administration and pitifully ignorant of the educational needs of the Island. Proud as they probably were of the achievements of education in the United States, they could think of no better plan than to try to transplant to Puerto Rico the standards and methods with which they were familiar on the Continent.[19]

On the other hand, the sudden change in government which the island underwent and the lack of experience the people had in school administration did not permit the Puerto Ricans in positions of leadership to see clearly what was more convenient for the country. The conflict of ideals between the Spanish culture and traditions and the new, practical, and pragmatic orientation shown by the new government brought about a temporary, predictable maladjustment from which originated some of the educational problems we still have not been able to solve completely. One such problem is doubt as to the principles, techniques and methodology that must guide the teaching of a second language. Another is the inadaptability of the North American school to the Puerto Rican cultural environment. For the first time American educational pragmatism—which at the time and in its instrumentalist form was propagated by John Dewey and was dominating the North American pedagogical scene—met Spanish idealism. Conflict developed between the prestige of the new system, the bewilderment it caused, the practical, and the conservative traditional; between a stronger, younger, more technical, more aggressive culture, and another, less dominant, less arrogant but equally sure of its values. As it has frequently happened in such cases, at first the new system simply tried to supplant the old one.

To American educators who came to Puerto Rico at the beginning of the new century, several problems deeply related to education were evident. Among them were the high percentage of illiteracy, the low level of public health, the lack of trained teachers, school buildings, and teaching equipment, the bad state of rural transportation, and the dire poverty suffered by most of the population. All of these factors affected school attendance and thus academic achievement.

A program of construction of school buildings was begun in the rural and urban zones, and it was hoped that all the school age population and even many illiterate adults could be enrolled.

Democratic procedures in teaching were instituted, and such subjects as industrial arts and physical and natural sciences were included in the secondary school curriculum.

A corresponding change was introduced in methodology. We have seen that during the time of the Spanish Government on the island much importance was given to the acquisition of knowledge through memorization. Emphasis now changed to the experimental method by which it was hoped to develop mental habits that use knowledge to solve everyday problems. But in spite of these initial steps the school's content and objectives continued to be foreign to Puerto Rican values, ideals, and culture.

Uncertainty as to the final solution of the political status of the island has interferred with the task of formulating a reasonable, precise and convenient educational policy for Puerto Rico. The plans and objectives to make Puerto Rico a bilingual country, and the political connotations attached to the teaching of English degenerated into a subject of party politics when it should have been from the beginning exclusively a pedagogical problem.

The North American commissioners of education sent to Puerto Rico after 1899 were determined to make the island a bilingual country. This aim placed the teaching of English in a position of primary importance in the educational system.

> The effect of this situation on the school system has been paralyzing: objectives have remained indefinite; courses of study have been left inchoate; methods of instruction have not crystallized into a defensible system; teacher training has lacked directness; the preparation of suitable textbooks has been discouraged; and the development of an autochtonous philosophy of education has been blocked.[20]

Both the lack of a philosophical orientation of the school system and its unawareness of the culture and life of Puerto Rico are further emphasized by Dr. Juan José Osuna, the principal architect of the College of Education of the University of Puerto Rico, when he states:

> It would be very difficult to point out a fundamental philosophy of education which might have served as a guiding principle for the educational system of Puerto Rico since the American occupation. In fact the main difficulty with the school system of the Island has been the lack of a philosophy, orienting the activities of the commissioners and those sharing with him the responsibilities for the administration of the school system. As a general rule new commissioners introduced changes without any fundamental principles to guide them and without a continuous orientation in accordance with the demands of the environment.

> Were we to mention objectives before 1930, perhaps we could point out three which seemed to be common to all commissioners, these being: Americanization, Extension of the school system, and the Teaching of English. Outside of these three objectives, we might say that the school system of Puerto Rico, like the political status, has been like a ship without a haven to anchor in, roaming the seas with no definite home port in view. Of course, reading, writing and arithmetic were taught, the school grew somewhat like Topsy, many good things were done, but it has lacked so far a fundamental philosophy pointing to goals and ends to achieve. The system has not known where it is going.[21]

The truth of the matter is that nobody can speak of development of education in Puerto Rico since 1898 up to the present without realizing that the central theme has been the language problem. This problem was created since the turn of the century as the result of an ill-advised and short-sighted policy of Americanization.

For the new government established in 1898, the language problem was by far the thorniest in the educational field: Not only was it the least understood, but—due to lack of competent personnel—the most difficult to tackle. The misunderstandings, misinformation, lack of experience in administration of colonial territories, and overoptimism over the success of the American type of public, universal, and free school system led the first U.S. officials to commit some mistakes in policies from which the Puerto Rican school system has been unable to recover. Manuel and Fife, referring to the language policies express doubt "whether its difficulties were appreciated by anyone who undertook to create an educational system for the Puerto Ricans".[22]

When we come to realize that the teaching of Spanish and English have taken up from one-fifth to one-half of the school program, we may easily see that our school curriculum has been and still is language oriented. The curriculum has been overloaded with linguistic studies.

The first American educators who came to the island thought that the Spanish spoken in Puerto Rico was not an appropriate vehicle to transmit the culture the people already had and much less the culture the educators intended to introduce. Their experience at this time in Hawaii and the Philippine Islands, where there was no common language to serve as depository and transmitter of the cultures of the people of those islands made the Americans believe that the Spanish language in Puerto Rico, taken by some for a patois, should be replaced by English. Dr. Victor S. Clark, misinformed and mistaken, made the following statement:

> There does not seem to be among the masses the same devotion to their native tongue or to any national ideal that animates the Frenchman, for instance, in Canada or the Rhine provinces. Another important fact that must not be overlooked, is that a majority of the people of this island does not speak pure Spanish. Their language is a patois almost unintelligible to the natives of Barcelona and Madrid. It possesses no literature and little value as an intellectual medium. There is a bare possibility that it will be nearly as easy to

> educate this people out of their patois into English as it will be to educate them into the elegant tongue of Castille.[23]

In the following remarks Cebollero concurs with Osuna:

> In making such a hasty generalization about the quality of the Spanish spoken by the Puerto Ricans, Dr. Clark was unaware that the Castillian form of Spanish is not spoken in Spain itself outside of the province of Castille, and that the difference between Castillian and Spanish as spoken in most of Spain and in the Spanish countries of America is a matter of the pronunciation of a few letters and of a certain rhythm and inflection. His reference to Barcelona as a place where the Puerto Rican brand of Spanish would not be understood is particularly unfortunate because the native of Barcelona does not speak Spanish but Catalán, one of the principal dialects of Spain. That the Spanish spoken in Puerto Rico is as good as that spoken in most of Spain and better than the Spanish spoken in many provinces of Spain itself has been attested by Dr. Tomás Navarro Tomás, a noted Spanish philologist from the University of Madrid, who recently made a study of spoken Spanish in Puerto Rico.[24]

Dr. Cebollero, in his doctoral dissertation, adds:

> In justice to Dr. Clark it should be said that he modified his judgment shortly afterwards. In 1900 he prepared a manual for the elementary school teachers of the Island from which the following quotation is taken:
>
> "The justification for the study of the two languages (Spanish and English) lies in the fact that one is the mother tongue of the great majority of the pupils of this island and is doubless destined to be the household tongue of the people for many years to come. To exclude its study is to allow it to degenerate into vulgar and ungrammatical patois, which, while it would not loosen its tenacious hold upon popular sympathy, would cease to be an active force in the culture and enlightenment of the people." [25]
>
> This early recognition of the need for the study of the two languages thus marks the appearance of the language problem in the Puerto Rican school system.[26]

President McKinley enjoined Gov. Charles A. Allen to prepare the Puerto Ricans for Statehood as rapidly as possible. Thus Commissioner of Education Martin G. Brumbaugh—and those who succeeded him—became more set in the determination to make Puerto Ricans a bilingual people. This was the first time under the American Government that the President of the Nation expressed himself on a specific political solution for Puerto Rico.[27]

Since the order issued by President McKinley, several policies have been developed in favor of bilingualism. This is an instance in which the educational philosophy, at least insofar as language is concerned, has followed clear and specific political objectives. The different commissioners of education, appointed by the Presidents of the United States and responsible only to them and to Congress (which ratified their appointments) varied in their attitudes in regard to the teaching of English with changes in instruction from Washington, and of course, with changes in the political administration in the United States.

Seven different phases of the teaching of English in Puerto Rico are clearly defined from 1900 to the present.

1. The first phase prevailed between 1900 and 1905. It was begun by the first commissioner of education of Puerto Rico under the American Government, Victor S. Clark, who, with Dr. John Eaton, was in charge of the reorganization of the school system of the island in 1899. His policy established English as the sole medium of instruction.

2. Commissioners Martin G. Brumbaugh and Samuel McCune Lindsay adopted a policy of bilingualism, directed at the conservation of Spanish and the acquisition of English. Spanish was the language of instruction in the elementary school and English was used for teaching in the secondary schools (grades 9–12).

3. During the administrations of Commissioner Falkner and his successors (1905–16), English was used as the medium of instruction in all the grades of the school system. This reverted to the original Clark policy which reached its peak during the years of 1905 to 1913. Commissioners Dexter and Barlow carried the policy of the teaching of English to its extreme; Dexter decreed that reading in English be taught in the first grade before children were taught to read Spanish.[28]

During these years, motivated in part by the excesses of these commissioners, a period of separatist sentiments arose in Puerto Rico. Those in favor of English as the language of instruction were identified as American *asimilistas*,[29] and those in favor of Spanish as *separatistas*.[30] To this day the teaching of English has never been able to free itself from a certain political involvement. Sometimes it has even had the characteristics of an issue; this has made very difficult the development of a well-oriented methodology to teach English.

4. During the administration of Commissioners Paul G. Miller and Juan B. Huyke (1916–34) and even during the first years of Dr. José Padín's administration (1934–37) Spanish was the language of instruction in grades 1–4 and English in grades 6–8. The fifth was a grade of transition: half of the subjects were taught in English and half in Spanish. In the secondary schools, only English was used for instruction.

In spite of the renewed efforts to intensify the teaching of English, the study carried on by the International Institute of Teachers College of Columbia University in 1925 found that the achievement of students in English at the end of the third grade did not justify the effort, the time and the money devoted to its teaching, and that even less justified was the denial of opportunities to the rest of the subjects in the curriculum. The study made by the institute recommended that

English be taught from the fourth grade on instead of beginning its teaching in the first grade. However, the sensible recommendations made on the basis of the findings of the teachers college survey were disregarded, and until 1934 the English language continued to be taught from the first grade.

5. The first commissioner of education who faced the problem of the teaching of English in Puerto Rico, critically and experimentally, was Dr. José Padín. In 1916 he had carried out the first study of the teaching of English according to the plan of Commissioner Falkner (most of the subjects of the curriculum were taught in English). The study conducted by Dr. Padín showed that at the end of 8 years of contact with English, students did not master any of the four fundamental phases that constitute the learning of a language: oral production, oral reception, reading, and writing.

When Dr. Padín took charge of directing the educational tasks of the Department of Education he decreed, on the basis of his experiment and other observations, that Spanish be used as the medium of instruction in all the grades of the elementary school. English was given special attention (double periods daily and well-prepared teachers), but it was taught as a subject and as a foreign language.

6. Dr. Padín was succeeded by Dr. José M. Gallardo in 1937. During Dr. Gallardo's administration, the Government of the United States, which had never expressed itself publicly in regard to the educational policy to be followed on the island, made declarations concerning the problem of the teaching of English. In a letter sent by President Roosevelt to Dr. Gallardo it was stated clearly that it was the policy of the American Government that Puerto Ricans should acquire a thorough knowledge of the English language so that Puerto Rico could become a bilingual country. The letter makes no reference to the question of which language is to be used as the language of instruction.

Because of the relevance of this letter, it is herewith quoted:

THE WHITE HOUSE,
Washington, April 8, 1937.

Dr. JOSÉ M. GALLARDO,
College of Charleston,
Charleston, S.C.

MY DEAR DR. GALLARDO: I have decided to appoint you Commissioner of Education for Puerto Rico and have sent your name to the Senate.

I desire at this time to make clear the attitude of my administration on the extremely important matter of teaching English in Puerto Rico. Puerto Rico came under the American flag 38 years ago. Nearly 20 years ago Congress extended American citizenship to Puerto Ricans. It is regrettable that today, hundreds of thousands of Puerto Ricans have little and often virtually no knowledge of the English language. Moreover, even among those who have had the opportunity to study English in the public schools, mastery of the language is far from satisfactory. It is an indispensable part of American policy that the coming generation of American citizens in Puerto Rico grow up with complete facility in the English tongue. It is the language of our Nation. Only through the acquisition of this language will Puerto Rican Americans secure a better understanding of American ideals and principles. Moreover, it is only through thorough familiarity with our language that the Puerto Ricans will be able to take full advantage of the economic opportunities which became available to them when they were made American citizens.

Puerto Rico is a densely populated Island. Many of its sons and daughters will desire to seek economic opportunity on the mainland or perhaps in other countries of this hemisphere. They will be greatly handicapped if they have not mastered English. For it is obvious that they always will and should retain facility in the tongue of their inherited culture, Spanish. Clearly there is no desire or purpose to diminish the enjoyment or the usefulness of the rich Spanish cultural legacy of the people of Puerto Rico. What is necessary, however, is that the American citizens of Puerto Rico should profit from their unique georgraphical situation and the unique historical circumstance which has brought to them the blessings of American citizenship by becoming bilingual. But bilingualism will be achieved by the forthcoming generation of Puerto Ricans only if the teaching of English throughout the insular educational system is entered into at once with vigor, purposefulness and devotion, and with the understanding that English is the official language of our country.

Sincerely yours,

(S) FRANKLIN D. ROOSEVELT.[31]

The substance of this message lead Dr. Gallardo to abandon Padín's policy and try out different procedures.

After various changes up to 1942, he finally estalished Spanish as the medium of instruction from the first to the sixth grades. [This was going back to the Padín's policy.] Junior high schools had now been established, and here English was the principal medium of instruction, with some subjects taught in Spanish. In the senior high schools, both English and Spanish were used.[32]

Influential in changing the Gallardo policies was Dr. Algernon Coleman.

In February 7, 1939, Dr. Algernon Coleman, professor of French at the University of Chicago, was invited to Puerto Rico with the purpose of looking over the "teaching of English" on the island, as a member of the committee on modern languages of the American council on education. After his visit he wrote the following letter to the Secretary of the Interior:

April 3, 1939.

Hon. HAROLD L. ICKES,
Secretary of the Interior,
Washington, D.C.

DEAR MR. SECRETARY: This letterhead explains in part the topic of this letter and why it interests me. I may add that problems of language teaching have occupied me for several years and that I have published a number of things in the field.

I spent a month in Puerto Rico, February 7 to March 7, and during that time took occasions to talk unofficially with a number of persons in regard to the educational problem there in general, and particularly about the teaching of English. Furthermore, I observed classes in English in several schools in San Juan and in one or two outlying towns. As a result of this quite informal and unofficial exploration of the question, I have come tentatively to certain conclusions with which you, Mr. Secretary, should be acquainted, in view of the responsibility of your department for insular affairs. I know that the Commissioner of Education for Puerto Rico is appointed by the President, but I am confident that your judgment carries much weight in all matters coming under the purview of your department.

The most striking fact in regard to the teaching of English in Porto Rico is, perhaps, that during the 40 years since we came to the island, there is no evidence that current scientific tendencies in the study of educational problems have made any impression. No systematic study has been undertaken of the results of the various plans for the teaching of English that have been put into effect—no examination of objectives, methods, materials and results on which a long-time program could be based. The changes that have been made whenever a new commissioner has taken office have usually been based on "feeling" rather than on knowledge: on the desire to do something different, rather than on purely educational considerations.

It has recently fallen to my lot to inquire into the teaching of English to Spanish-speaking children in the continental United States. I could naturally look to Porto Rico as a laboratory where data might be secured. It speedily became clear, however, that no evidence of value could be found in the history of teaching English on the island, although that has been the dominant educational problem in Porto Rico for 40 years. I do not deny that much devoted labor and intelligent effort have been given to this problem, but as no records of the results remain, no evidence is available on which successive administrations may build, even if by some miracle they proved to be eager to profit by the labors of their predecessors. Porto Rico has therefore contributed nothing to the solution of the problem that I was commissioned to study, except perhaps an example of how not to do it.

In Porto Rico policies have shifted with the opinions of individuals or as a result of pressure upon various groups. Teachers have felt and now feel largely at sea in regard to aims and procedures, and pupils have suffered. For example, data are at hand to show that in rural areas, from which come more than three times as many school children as from urban areas, more than 72 percent have dropped out of school before the end of the fourth grade. The question naturally arises whether it is wise to expend much effort in teaching these pupils English, since they have only three grades in which to gain a knowledge of the fundamental operations in their vernacular, and since the English that they will carry away from instruction at this period will be of small service. This is only one—but a not unimportant one—of the problems that present themselves to a person who has had some first-hand contact with the situation, and who considers it only from an educational point of view. I am not prepared on the basis of my brief experience in the island to propose a policy in regard to the question formulated above or to any other of the serious aspects of the educational problem, but it is clear that such facts as the one mentioned above must be taken into account by those on whom the responsibility rests.

There has been much talk of an educational program whereby the children of the Island ought to be made really bilingual. Such a purpose seems wholly unreal to one who is ever so little expert in these matters. We know, for example, what has been the outcome of the long-time effort of the British to accomplish this in India. Spanish will continue to be the mother tongue of all Porto Ricans. Even the relatively few who learn English quite well and have frequent occasion to speak it and to write it in business and in social situations revert to Spanish in the home and to express their intimate thoughts. Few of our theorists on the subject seem to realize the small number of opportunities that most Porto Ricans have for speaking English in any continuous fashion as a genuine vehicle of intercourse with others. It would be much more practicable to make of English a supplementary language for a large number of the islanders, a language to be read easily, to be written with fair ease and to be spoken intelligibly on the relatively rare occasions when the majority of Porto Ricans have occasion to use another language than their own.

It seems to me that too little attention has been given to formulating and applying useful criteria for choosing textbooks in most Porto Rican schools. It is fallacious to assume that the same criteria may be applied in selecting textbooks for children in Massachusetts, Illinois, Georgia and in Porto Rico. The experiential background, the intellectual background, the vernacular background of the island group must be taken into account. I do not mean that children in the Island should see books based only on the flora, the fauna, the traditions, the customs, the history of their own territory. At present, however, the current sets quite the other way, and the textbooks in use are almost wholly foreign to the background in which the young islanders live. For example, I observed high-school classes in which, following the textbook, teachers were laying stress on the avoidance of linguistic errors common among English-speaking people on the continent. Such language lessons are of small use in correcting the errors prevalent among Spanish-speaking people when using English.

I have said enough to indicate the main sources of the drifting, the confusion, the absence of definite aims and procedures, that impress a professional observer so forcibly and that have so greatly discouraged some of the best friends of English teaching in the island. When some of these have contended for a somewhat restricted but perhaps realizable goal, they have been accused of "anti-Americanism" by persons who look upon the teaching of English from other than an educational point of view.

The teaching of English has for the last 40 years absorbed most of the financial resources of the school system of Porto Rico. Those of us who are interested in the problem should be able to look in that direction for light. We find none; and with all due respect, Mr. Secretary, I insist that your Department is not properly discharging its duty to the island in regard to the teaching of English.

Let me conclude by saying that my interest in the matter is purely professional. It is probably because of the unofficial nature of my modest inquiry that well-informed and competent persons were willing to express themselves freely and thus to supplement what I saw with my eyes and heard with my ears in the classroom. Let me add that I expect to be in Washington for a meeting of the Committee on Modern Languages on April 16th and possibly the 17th. If you think the matter of sufficient importance, I should be glad to call on you and present the situation somewhat more in detail.

Yours very truly,

ALGERNON COLEMAN,
Professor of French.[33]

Dr. Gallardo's changes in policies brought about a stern letter from the Honorable Harold L. Ickes, Secretary of the Interior of the United States. This letter reads:

THE SECRETARY OF THE INTERIOR,
Washington, March 31, 1943.

MY DEAR DR. GALLARDO: I have before me a transcript of your testimony before the Chavez subcommittee on the question of the schools of Puerto Rico with reference to the teaching of English.

I say with regret that the evidence that you gave fails to impress me that there has been assiduity on your part in carrying out my distinct understanding with you on the subject of teaching English. Moreover, you seem to have paid little attention to the specific instructions from the President. I think you know that I would not have recommended you to the President for this post if I had not been assured that you realized as much as I did the obligation to teach English in the Puerto Rican schools. I am equally confident that the President would not have tendered you the appointment if he had not had my assurance and yours that this would be the keystone of your school policy. I am gravely disappointed, and I shall, of course, fulfill my obligation to advise the President as to my feelings.

Sincerely yours,

(S) HAROLD L. ICKES,
Secretary of the Interior.[24]

This letter from Mr. Ickes, prompted the resignation of Dr. Gallardo. To the Gallardo letter of resignation Mr. Ickes answered:

MY DEAR DR. GALLARDO: Following my letter to you of March 31, you tendered your resignation as Commissioner of Education for Puerto Rico. As I stated to you in the course of our conversation here, I did not intend by my letter to invite your resignation, and I am pleased that, at my request, you have withdrawn it.

The question of teaching English in Puerto Rico is easily misinterpreted both here on the mainland and in Puerto Rico. This is largely because any pronouncement on the subject immediately raises fears in Puerto Rico that there is to be some official attempt to deny the use of Spanish and, contrariwise, fear in the mainland that all efforts to increase the use of English in Puerto Rico are to be abandoned completely.

I believe that there is no difference between us as to objectives with respect to the teaching of English in Puerto Rican schools. These objectives were clearly stated by President Roosevelt in his letter to you on April 8, 1937. This letter set a goal that is not easy to achieve. But when you accepted the President's appointment you also accepted the obligation of striving for that goal. In his letter the President stated: "It is an indispensable part of American policy that the coming generation of American citizens in Puerto Rico grow up with complete facility in the English tongue." At the same time, the President made it clear that there would be no attempt to deny the people of Puerto Rico the use of Spanish: "Clearly there is not desire or purpose to diminish the enjoyment or the usefulness of the rich Spanish cultural legacy of the people of Puerto Rico."

On May 13, 1937, I wrote to Mr. Francisco M. Zeno, editor of *La Correspondencia* of San Juan, and stated, "I understand that it is proposed to use Spanish as medium of instruction for basic subjects in the primary grades and to teach English as a foreign language in those grades. In the higher grades the use of

English will be given increasing emphasis so that by the time the Puerto Rican children leave the elementary school it is hoped that they will have sufficient knowledge of the English language to permit of greater economic and social relationship with their fellow Americans on the mainland." These excerpts were indicative of the policy in 1937. There has been no change in the policy since that year.

* * * It is my desire that an increasingly large number of American citizens in Puerto Rico have a working knowledge of the English language. This, I know, is an objective that is shared by you. In other words, practical bilingualism is possible.

Naturally, American citizens should be able to speak English. Each succeeding generation of the island's residents should have the opportunity of sharing in the cultural, social, and economic progress of the Nation as a whole. Puerto Rico is attacking its problems on all fronts; language is not the exclusive factor in question. However, the lack of facilities to learn English, or any policy tending to decrease these facilities, would constitute an obstacle with which I do not believe Puerto Ricans should have to contend.

From communications I have received from Puerto Rico I gather that the overwhelming opinion is in favor of continuing and increasing the facilities for learning English. From your recent conversation with me I understand that you are in agreement with this objective. My own opinion is that practical bilingualism is desirable and can be achieved.

* * * It seems to me that [the] program may well result in having an increasingly large body of Puerto Ricans speaking and understanding English, who, at the same time, lose none of their proficiency in the use of Spanish * * *

Sincerely yours,

(S) HAROLD L. ICKES,
Secretary of the Interior.[35]

POLICY OF THE SUPERIOR EDUCATIONAL COUNCIL ON THE TEACHING OF ENGLISH

In June 1945 the superior council on education formulated a series of principles for a school language policy for Puerto Rico. Among them we find the following: English should be the second language of Puerto Rico, Spanish should be the medium of instruction in the elementary school, and in secondary school it should be used as the medium of instruction in all or most of the subjects taught. It was pointed out, though, that it is possible that in relation to those matters that are less closely associated with the local environment it might be more convenient to use both languages as means of instruction.

At the end of 1947 Professor Mariano Villaronga became commissioner of education after an interim period of over a year and a half had elapsed since the final resignation of Dr. Gallardo. In his address to the annual meeting of the teachers' association immediately after he took office, Commissioner Villaronga stated his views concerning the language of instruction that should be used in Puerto Rico. Villaronga expressed himself thus:

It is obvious * * * that in order to obtain the best results English should be taught in all levels of the school system; but if this teaching is to be effective it

> should consider English as a subject and not as the medium of instruction through which all the other subjects are taught.[36]

Commissioner Villaronga resigned June 30, 1947, because his confirmation was withheld indefinitely probably due to his views on the teaching of English. He was appointed commissioner again on January 3, 1949, by the first elected Governor of Puerto Rico, Luis Muñoz Marín.

Commissioner Villaronga, in a circular letter sent to the school districts on August 6, 1949, declared that:

> * * * Spanish will be the vehicle of instruction in the high school. This change, which responds to a long-felt need, extends definitely the use of the vernacular as the teaching means until the last year of high school.[37]

In an article in the San Juan Review of June 1965, Adrian Hull describes the Villaronga policy as follows:

> Under the Villaronga policy, an English section was created in the Department of Education whose function was to produce teaching materials and to supervise English teaching in the public schools from the 1st grade through the 12th. Whereas three general supervisors had formerly been responsible for the supervision of all English teaching in the public schools, the staff was augmented to include a director, seven general supervisors, and some curriculum technicians. A corps of local supervisors was created, known as zone supervisors of English. English was to be taught as one of several subjects of the curriculum, but with the status of a preferred subject. A new approach to the teaching of English was initiated, based on the principles of linguistic science. It recognized the radical difference in teaching English as a second language from teaching it as a native language.
>
> * * * The policy in effect today is still, for all practical purposes, the Villaronga policy. However, English no longer enjoys the preferential status envisioned by that policy, but is ranked alongside the other principal subjects of the curriculum.[38] The application of the principles of descriptive linguistics to the teaching of English as a second language is still fundamental to the methodology employed and to the production of materials for use in the English classes.[39]

As has been shown, during the decades of American Government on the island the policy to be followed in the teaching of English has claimed a great part of the attention of commissioners, teachers, and supervisors. Everything else in the educational system has seemed to be subordinated to the teaching of English. Commissioners Padín and Villaronga, although they gave preferential treatment to English, did not believe that all other subjects should be subordinated to the teaching of this subject.

ENGLISH TEACHERS

In the 1960 "Study of the Educational System of Puerto Rico" it was found that more than 60 percent of the 333 English teachers in the elementary school level had a preparation of a 2-year normal school training or less. The rest of the teachers have a bachelor's degree. Of 560 English teachers in the junior high school level, 43.8 percent did not have a bachelor's degree; 35.4 had a normal school training and 8.4 percent had an academic preparation of high school only. More than half (53.7 percent) had a bachelor's degree and 1.4 percent had a master's degree. In the senior high school out of a total of 183 English teachers, 10.9 percent had a normal school preparation or less (8.7 had normal school training and 2.2 percent were high school graduates); 80.3 percent had a bachelor's degree and 7.7 percent a master's degree.[40]

There are now (1965, first semester) 1,910 English teachers of whom 593 are at the elementary level and 1,317 at the secondary level. Among these 1,910 teachers, there are 10 North Americans who have come to the island by themselves and 19 who have come as part of the exchange programs (operation understanding, apprentice program and teacher exchange program). There are, in the island, 82 positions for English field assistants or zone supervisors of which four are vacant. Of the persons occupying the other 78 positions 60 have a master's degree and 18 have begun work toward a master's degree.

PUERTO RICANS' KNOWLEDGE OF ENGLISH

We may use two indexes to determine the knowledge of English Puerto Ricans have: (1) The percent of the population of children 10 years old and over, as indicated in the census taken every 10 years, states whether they know how to speak English, and (2) the results of comparative tests that have been administered periodically.

According to the 1960 census, the percent of persons 10 years old and over able to speak English is 37.7. This percentage has increased by 1964 to 45.9 percent according to a recent sample survey (September 1964) carried out by the bureau of statistics of the planning board. Table I included here indicates the increase in the number of persons since the 1910 census who know how to speak English. There has been a consistent increase from decade to decade, except in the period 1940–50. If we examine the percentage by age groups (tables II, III, and IV), we will notice that in this decade the percent in the 10–14 age group decreased considerably, while in higher age groups the tendency of constant increase continued. What could have been the causes for this decrease in the 10–14 age group? Most certainly the constant changes in policies and programs with the changes of commissioners of education. During this decade (1940–50) there were also several changes in the programs for the teaching of English. Let us take a look at these.

TABLE I.—*Percentage of persons 10 years old and over with ability to speak English, by sex and by zone—census years 1960 to 1910 (Puerto Rico)*

	1960	1950	1940	1930	1920	1910
Total	37.7	26.1	27.8	19.4	9.9	3.6
Male	39.5	28.0	29.6	20.6	10.6	(1)
Female	35.9	24.2	25.9	18.2	9.2	(1)
Urban	49.0	36.5	42.2	(1)	(1)	(1)
Rural	28.0	18.3	20.8	(1)	(1)	(1)

[1] Data not available.

Sources of information:
1. U.S. Department of Commerce, Bureau of the Census. "U.S. Census of Population: 1960." "Puerto Rico General Social and Economic Characteristics." PC 1-53C, table 43, pp. 53-121.
2. U.S. Department of Commerce, Bureau of the Census. "1950 United States Census of Population, Puerto Rico, Detailed Characteristics." PC 53, table 57, pp. 134-135.
3. U.S. Department of Commerce, Bureau of the Census. "16th Census of the United States: 1940. Puerto Rico: Population, Occupations and other Characteristics by Age," Bull. No. 3, table 13, pp. 35-36.

TABLE II.—*Percentage of persons 10 years old and over with ability to speak English, by age, years 1960, 1950, and 1940 (Puerto Rico)*

Age group	Puerto Rico: total			Age group	Puerto Rico: total		
	1960	1950	1940		1960	1950	1940
Total, 10 years and over	37.7	25.9	27.8	30 to 34 years	45.1	31.1	24.8
10 to 14 years	35.6	19.2	41.8	35 to 44 years	36.9	22.9	17.7
15 to 19 years	51.5	41.1	42.7	45 to 54 years	27.6	16.4	10.0
20 to 24 years	51.4	35.8	33.1	55 to 64 years	19.2	9.0	4.8
25 to 29 years	50.1	35.5	29.5	65 to 74 years	10.4	4.0	2.4
				75 years and over	4.6	2.1	1.6

TABLE III.—*Percentage of persons 10 years old and over with ability to speak English, by age and sex, years 1960, 1950, and 1940 (Puerto Rico)*

Age group	Male			Female		
	1960	1950	1940	1960	1950	1940
Total, 10 years and over	39.5	28.0	29.6	35.9	23.8	25.9
10 to 14 years	33.1	19.1	41.8	38.2	19.3	41.8
15 to 19 years	49.1	41.4	44.2	54.0	40.9	41.4
20 to 24 years	54.4	37.6	34.8	48.7	34.1	31.5
25 to 29 years	56.8	41.2	32.4	44.7	30.1	26.8
30 to 34 years	52.6	36.8	28.3	38.6	25.3	21.3
35 to 44 years	43.8	26.3	21.6	30.5	19.2	13.8
45 to 54 years	31.4	19.9	13.2	23.4	13.6	6.4
55 to 64 years	21.4	11.1	6.6	16.9	6.6	2.7
65 to 74 years	11.8	5.3	3.2	8.9	2.8	1.6
75 years and over	5.4	2.6	2.2	3.9	1.7	1.2

The 1940–41 "Annual Report of the Commissioner of Education" states the following about the teaching of English:

> The teaching of English in the elementary schools has been marked during the past year (1940–41) by the introduction of a new distribution of time allotted to instruction in English and Spanish. All teaching in grades one and two was made in Spanish, except for a period in simple English conversation. The mechanics of English reading began in the second grade. In grades three, four, five and six the school day was divided into two sessions, one devoted to the

TABLE IV.—*Percantage of persons 10 years old and over with ability to speak English, by age and by zone, years 1960, 1950, and 1970 (Puerto Rico)*

Age group	Urban			Rural		
	1960	1950	1940	1960	1950	1940
Total, 10 years and over	49.0	36.5	42.2	28.0	18.3	20.8
10 to 14 years	43.5	22.5	58.0	30.6	17.3	35.7
15 to 19 years	62.6	52.6	60.9	43.5	33.4	34.1
20 to 24 years	63.2	48.4	51.2	40.4	25.5	24.2
25 to 29 years	62.5	48.6	47.9	36.8	23.8	19.7
30 to 34 years	59.2	43.9	42.2	30.0	20.1	15.5
35 to 44 years	51.4	35.4	32.7	22.9	12.8	10.0
45 to 54 years	41.6	27.6	19.8	14.9	7.3	5.0
55 to 64 years	30.4	15.9	9.9	8.6	3.4	2.2
65 to 74 years	16.9	7.2	4.9	4.2	1.5	1.2
75 years and over	7.1	3.8	3.1	2.1	.7	.9

teaching of subject matter in Spanish, the other was devoted to English as related to subject-matter.[41]

A special feature of the curriculum in English was the establishment in 1942–43 of an extra 45-minute period for English in grades three to six. This period was called the English project period. The aim of the project was to intensify the teaching of English.

The teaching of a basic vocabulary was emphasized. There was an attempt to coordinate the English work in the elementary and secondary schools by concentrating efforts on the basic vocabularies at the various levels.

In 1948–49 there was a shift in language policy. Spanish became the medium of instruction in the junior high schools. New language courses were introduced in both elementary and secondary schools. These language courses "were characterized by much aural-oral training in the beginning stages and by materials which stress the essential features of sound and structure of the language being taught." [42] All these changes in policy and programs, no doubt, produced the negative results mentioned and which affected the age group 10–14 during the 1940–50 decade.

TESTS RESULTS

In 1925 the Educational Survey Commission of the International Institute of Teachers College, Columbia University, made a survey of the Puerto Rico educational system. The commission stated:

> * * * a speaking knowledge of English is desired by Porto Ricans in addition to Spanish because of the social and economic advantage which it gives. The schools are teaching English not to compel unwilling people to accept a new idiom but because Puerto Ricans wish to learn and to have their children learn to speak and read English.[43]

The testing program of the commission centered around the language program and large numbers of students were tested both in

English and Spanish. English tests began in the fifth grade. They intended to test general reading ability and ability to understand oral English. The commission's report of the measurement results stated that:

> In the primary schools those children who remain to the fifth grade do develop marked ability to comprehend spoken English * * * In the second place those who remain five or more years learn to speak English with sufficient clearness to make themselves be understood either by other Porto Ricans or by Americans.[44]

The commission believed, though, that Puerto Rican schools were deficient in the teaching of reading:

> In the fifth grade Porto Rican children read about as well as American children do in the third grade; the sixth grade corresponds approximately to the fourth in continental United States; the seventh and eighth grades show but slightly more skill. In fact, beginning with grade seven the lag in reading ability as shown by the test for reading difficult paragraphs amounts nearly to three years.[45]

Besides, it reported a very meager growth in reading ability from the eighth grade to the fourth year in high school.

In 1941 Manuel and Fife as representatives of the American council's committee on modern languages began a study of the teaching of English in Puerto Rico. As part of this study some 80,000 tests were administered to nearly 20,000 children and youths in the schools and colleges of Puerto Rico. All grades from the first year of the elementary schools to the first year of college were included, and both public and private schools and colleges were represented. In the summary and interpretation of the results the authors concluded that:

> As expected, the average Porto Rican pupil reads English with much less efficiency than the average continental pupil of the same grade. There is evidence that he reads material from the natural sciences with relatively more efficiency than he reads material from the social studies or non-specialized material.
>
> As a kind of general average it may be said that in the high school the average Porto Rican pupils read English at the level of efficiency of a continental English speaking pupil two and one-half of three grades below the level at which the Porto Rican pupil is enrolled; that from 15 to 20 percent of Porto Rican high school pupils read English as well as or better than the average continental pupil of the same grade; and that at the end of the high school 10 to 15 percent of the pupils read English as well as they read Spanish.[46]

In 1948–49 the Institute of Field Studies of Teachers College, Columbia University, made a curriculum survey of the Puerto Rican public schools at the request of Acting Commissioner Francisco Collazo.

The survey staff did not measure, through tests, the results of English instruction. It made, though, an appraisal of the use of the linguistic approach in the teaching of English. The staff noted, among other aspects, the following features of the program:

> Pupils and teachers seemed to find the classes both enjoyable and worthwhile.
>
> The English which observers heard in these classes sounded like English.
>
> The practice of the controlled fundamentals of English communication was observed to be improving the English of the teachers as well as that of the pupils. It seemed to be effecting a kind of in-service education without removing the teachers from their classrooms.
>
> When pupils read from the blackboard the material which had been orally presented, they read in sentence units rather than in word units.
>
> Observers who looked at the notebooks of pupils commented upon the neatness and accuracy of the work, since pupils had learned the satisfaction that comes with complete mastery of the materials orally presented.[47]

The survey staff recommended "that only the oral use of English be taught in grades 1 and 2, since it is in these grades that pupils are learning to read and write in the vernacular. Beginning with grade 3, it is important that the English program include suitable emphasis on the skills of reading and writing, not only because the use of these skills is essential to 'civilized' society, but also because reading and writing reinforce the oral-aural skills. Thus, it is recommended that reading be considered secondary to speaking, but *second only in terms of chronology*, that is, not second in terms of importance." [48]

In the 1958 survey of the educational system a test was prepared to evaluate the results of oral English instruction and another one to measure results of English language instruction. The former was administered in grades six and nine and the latter in grades six, nine and twelve. The results of the oral English comprehension test show that in both sixth and ninth grades:

> Some students answered correctly all the exercises while others got a score lower than the one that could be obtained by merely guessing. In other words, some students understood practically nothing, while others understood everything—at least they were able to answer all the items correctly.
>
> * * * In the language test the highest possible score was 91 and some students did get this score * * *. One percent of the sixth grade students who obtained the highest scores in the public schools have scores of 85 and more, while one percent of the lower limit of the distribution got scores of 17 or less. Some 12th grade students in public schools obtained almost perfect scores, but 25 percent of the students answered correctly not more than 55 out of the 91 questions, which were based on the first three books of Fries American English Series.[49]

There is no denying the fact that there are constantly new changes and socioeconomic and political developments that stress the ever increasing need for Puerto Ricans to learn more and better English as a second language. Among these is the constant movement of people between Puerto Rico and the mainland; the remarkable increase in tourism during the last years; the rapid industrialization of the Island; the compulsory military service and the increase in the number of Puerto Rican enlistees in the Army due to the two World Wars, the Korean war and the conflict in Viet Nam; the substantial number of university students who go through ROTC; the effects of the educational programs for veterans; the ever increasing number of civic, economic, and social organizations from the States which establish chapters in Puerto Rico, and the new Federal laws approved by the U.S. Congress on education, housing, and medicare, among others. Above all these undeniable facts, the elimination of the imposition of English as the medium of instruction did away, considerably, with the psychological blocking which so hampered the learning of English by the Puerto Ricans. The increased understanding by Washington officials, the breakthrough in better political relations, and the desire of the majority of the people for permanent association with the United States have developed a better climate for the acquisition of English as an instrument of culture, association, and ever-increasing understanding and good will among people who are so closely bound by a common citizenship and by a core of democratic ideals and principles.

THE NEED TO LEARN ENGLISH

The teaching of English in the schools of Puerto Rico is and will continue to be a matter of great importance. We feel that some observations are in order in relation to this problem. As we continue our association with the United States by mutual consent, by bonds of citizenship, and by commercial relations of mutual convenience (as long as both countries by common consent do not decide something else) English should continue gaining importance as a second language for all the citizens of the Commonwealth of Puerto Rico. But we must continue cultivating Spanish with great care because it is not only our vernacular but the basic tool of association with, and understanding of, the Hispanic world, to which we are associated historically and culturally.

The Puerto Rican who migrates to the United States must be equipped with enough knowledge of the English language to be able to feel at ease in any community of the United States where he may go to work or to live. Those migrants with a lesser or no knowledge of English are frequently the most exposed to exploitation, delinquency, and discrimination. They also have to accept the most disagreeable and poorly paid jobs. Furthermore, upon reduction of personnel, they are the first to be laid off. Even when Puerto Ricans go to the United States for pleasure or to shop or for medical reasons, it is of the utmost importance that they know enough English to benefit the most from these trips. And as those Puerto Ricans who stay here will need more English daily to do better in their businesses, their professions, and their studies, as well as for personal satisfaction and cultural enjoyment, it is the duty and the responsibility of the school to continue to provide the citizens of the Commonwealth of Puerto Rico with the knowledge of and skill in English. Certainly neither Spanish nor its use as a medium of instruction for other subjects in the curriculum should be sacrificed just to give an exaggerated emphasis to the teaching of English. On the contrary, the teaching of Spanish should be strengthened. Aside from political and other relations with the United States the great value of English, as a powerful modern language, cannot be disregarded.

Professor August B. Hollingshead, distinguished sociologist of Yale University, wrote to us on this matter:

> Puerto Rico, as a free commonwealth in association with the United States of America, will undoubtedly continue to play an important part in the social, cultural, and economic life of the United States. The experience we have gained from our close association with Puerto Rico in the years since World War II indicates that there will be continuous migration, of some numbers, of persons from the United States to Puerto Rico each year but larger number of persons from Puerto Rico to the mainland. As the years pass, more Puerto Ricans might migrate to the mainland. Even though the numbers remain approximately what they have been since 1945, I believe my point regarding the educational system of Puerto Rico is important. It is this: Puerto Ricans who migrate to the mainland have been handicapped in their adjustment to life in the United States by their limited knowledge of the English language. Their lack of knowledge of the English language has handicapped them in their search for jobs, housing, and participation in the social life of the communities where they have settled. If Puerto Ricans who migrate knew English well they would be able to command better jobs. This would enable them to raise their standard of living and adjust to American conditions more readily. In sum, the inclusion of English in the curriculum of the Public Schools of Puerto Rico from the elementary grades on through high school is indicated. The need to learn English, of those migrating to the mainland, is a primary one.
>
> It is possible that the lack of knowledge of the English language among Puerto Rican migrants will slow down the process of assimilation a generation or more. Their problems of adjustment in the United States are magnified by linguistic differences. The native ability of Puerto Ricans has been demonstrated by the remarkable way in which they have moved from an agricultural economy into the urbanized industrial life characteristic of our generation in Puerto Rico and the United States. A knowledge of English would help those who migrate to capitalize upon their inherent native ability.[50]

Nevertheless, no matter how important the above considerations might be, it must be made clear that the educational system of Puerto Rico should not have as its goal education for migration or for the export of human beings. The greatest effort should be made to equip the Puerto Rican people well, including offering them the training necessary for the mastery of English, to educate them in the best possible way, and in so doing, to help them to be good, capable citizens wherever they go.

We must insist on certain basic ideas when we get to the theme of the teaching of English:

1. The technical and pedagogical problems of the teaching of English should not again become a political issue. No one in Puerto Rico at this moment denies the need of having all skillful, capable persons learn good English. Dissent will mainly concern the methods and techniques that will help attain this goal. This is a technical matter to be solved by competent persons and one which requires research work and experimentation not yet done.

2. The phrase "the teaching of English will be intensified" lends itself to confusion. The policy to be followed and reasons for it should be explained clearly, along with the psychological, pedagogical, and linguistic reasons that justify its adoption. Reports should be made specifically on what is being done and to what degree of effectiveness, in order to intensify the teaching of English. There should be frequent evaluation directed to correct deficiencies and strengthen those aspects that deserve it.

3. English is not the most important subject in the school curriculum. It is important, but not so much as to justify the deterioration of Spanish or the dearth of resources used for the teaching of other subjects like science, social studies, mathematics, and the arts. In evaluating school achievement we must take into consideration the fact that almost half of the school time is used in the teaching of English and the vernacular.

4. The learning of languages is expensive both in money and in time, even among those who are well-endowed intellectually. It must be more expensive when dealing with education of masses. We cannot expect from all individuals a uniform proficiency in the mastery of a second language—or even of the vernacular. Not everyone learns languages with the same facility, and this is more true when there exist marked differences in opportunities at home, in the social environment and even in the school itself.

5. The policy of taking the whole island as an area of experimentation when a change in language policy is contemplated should be avoided. Nobody has yet found the best and only way to teach a second language: In our case, the best way to teach English. The changes in policy with each new administration have proven to be expensive, and one cannot be sure that the present policy is the right answer to the educational problem. The frequent changes, made many times without reasonable experimentation, lower the morale of the teaching body, stimulate incredulity, and cause a decrease in the enthusiasm of those who must adapt them-

selves to new practices without having been convinced beforehand of their value, usefulness or justification.

6. One of the obstacles faced by the teaching of English is the deficient way in which Spanish is being taught. If fourth and fifth grade students cannot read or write satisfactorily their own language, reading and writing in English should not be introduced to them: If the student does not have an adequate knowledge of his own language, it will be more difficult for him to learn a second language. So Spanish must be learned well not only for itself and because of what this learning means in terms of logical, free, spontaneous thought processes, aesthetic enjoyment, and appreciation of our own culture, but also because in order to learn English we must learn better Spanish.

7. In teaching both English and Spanish, the fact must be kept in mind that aside from the educational opportunities offered in the school there is very little opportunity to hear or speak English outside the classroom. If the constructive linguistic opportunity is meager in the school and very scarce and poor out of it, this is an important factor that must be considered when judging the planning of the language teaching program in the country.

8. As we are now free from outside interference to determine the language policy to follow in Puerto Rico, full responsibility falls on the educational leadership of this country. That is, we must accept as ours the attainments and the errors. Giving opinions and repeating experiences cannot substitute for experimentation, no matter how extensive and difficult it may be.

9. The recommendation made in the report by Fife and Manuel, the "Teaching of English in Puerto Rico," that every child in Puerto Rico should be given the opportunity of learning some English is still valid, with the exceptions made above (see Number 4). This would mean that each student should be provided an opportunity for linguistic development to the limit of their ability.

We have already said that in the teaching of languages "the best method" or "the only method" does not exist. "In reality there is no universal 'best method', since method depends on a number of variables: objective, age, group ability, duration of instruction, are among them."[51] We would add: In Puerto Rico any method would be conditioned also by the quality and training of the teachers, the provision of teaching materials adapted to the environment and to the students, and by the effectiveness of supervision.

Drs. Manuel and Fife in their study of the "Teaching of English in Puerto Rico" state guiding principles which should have been taken into consideration:

> The ideal of English for all Puerto Ricans must be interpreted realistically, i.e., the mastery of English will be an objective to be attained only so far as the practical situation permits and the balance among competing educational needs shows to be wise. Action will have to be determined, not by the failure to recognize the need of English, but by the amount of English that can be learned with the time and energy which can be given to it without neglecting other educational objectives. A survey of these makes it apparent that now and so far in the future as the Department needs to plan, it would be fantastic to expect that the majority of the Puerto Ricans can be made efficient in English with any school program that can be put into operation. The overwhelming number of young Puerto Ricans will learn Spanish at home and English, if it is learned at all, outside the home. The mastery of English except in the natural situation, where it is learned by association with those speaking the language, is a difficult task, to be conquered only by the more gifted or the more persistent students. The cultural handicap of so many Puerto Rican children, the short school life of so great a proportion and the part-time school day to which they are restricted, particularly in the rural districts, are severely limiting factors. The result is that while the use of English will continue to be an objective for the people of the Island, effective mastery at an advanced level can be a practical objective only for those who have high ability and a long school life or those who have opportunity for acquiring it in a natural situation.
>
> In establishing goals of English instruction it must be realized that many pupils will stop at relatively low levels of achievement. This should not lead, however, to a denial of the opportunity to learn nor to an over-emphasis of English in a futile effort to achieve skills beyond normal expectation. In general, children may be expected to make progress in English in proportion to their general ability, their opportunities, their motivation, and their mastery of the native language. Even if a child can learn only a little English in three or four years, the answer is not to be found in intensifying the effort to teach English with the sacrifice of other important subjects but in longer schooling.[52]

The above quotation was taken from a report by Dr. Manuel and Dr. Robert H. Fife, published in 1951 and the most thorough study on the matter which had been made till that time.[53] Unfortunately this report is little known, even in educational circles; if it had been read and used in a professional spirit, undoubtedly it would have contributed in a significant way to the advancement of the best practices in the teaching of English as a second language.

There is one more idea expressed by Dr. H. T. Manuel in a special report prepared for the "Study of the Educational System," an idea which needs to be emphasized:

> In improving language teaching, what Puerto Rico most needs is a program of experimentation to produce materials and to try out the products of experimentation without unsettling schools by sudden shifts from one program to another which is untried. Problems of this magnitude cannot be solved overnight by the opinions of "experts", and certainly not by experts whose attention

is too narrowly limited. The program of experimentation should be broadly conceived, adequately financed, and carried forward over a period of years.[54]

Dr. Ralph B. Long, professor of English from the University of Texas and currently head of the three departments of English at the University of Puerto Rico, in a report which he submitted as part of the overall study of the educational system of Puerto Rico after 10 months of intensive study of the problem, expressed himself thus:

> It is important to the healthy development of English in Puerto Rico that the primary importance of Spanish be recognized at once. This is a Spanish-speaking island. Puerto Ricans are citizens of the United States, like Texans and residents of the District of Columbia; but their citizenship does not involve any requirement that they speak English. Furthermore it is more and more apparent that the United States must demonstrate to the world a respect for variety in language comparable to the respect it has long shown for variety in religion. Even among its citizens, the United States must accept varieties in language just as—and the granting of statehood to Hawaii is significant here—it has to accept varieties in cultures and in racial origins. Political arguments for favoring English above Spanish in Puerto Rico are out of date. It is fortunate that this is so.
>
> Everything possible should be done to strengthen the teaching of Spanish in the schools of Puerto Rico. Satisfactory spelling, punctuation, and sentence structure should be established in Spanish; skill in reading and in composition should be established in Spanish. These are difficult tasks for mass education both in Spanish and in English. It is a constant complaint of universities on the continent that entering students are deplorably weak in these basic skills in their home language, English, and that for this reason, as Howard Mumford Jones phrased it in a 1957 Newsletter of the America Council of Learned Societies—"the greater part of the time and energy of the largest single fraction of the staff of the American university is spent in doing, not what the high school should have done, but what the grade school should have done."
>
> Habits of accuracy and system in the reading and writing of Spanish are of the very greatest importance in Puerto Rico. Better work in almost every subject taught in the schools, and certainly in English, can be expected to result from strengthening the teaching of reading and composition in Spanish. As Fife and Manuel wrote, the problem is to find out—"how two languages may best be learned with maximum reinforcement one of the other and with minimum interference."
>
> It was predictable that Fife and Manuel's study should show that generally "ability to read English varies with ability to read Spanish."[55] Even the vocabularies employed in the two languages overlap greatly: first, because English has borrowed so extensively from Latin and its modern descendants; second, because much of the new vocabulary of science and technology is truly international and interlingual; third, because the Spanish of Puerto Rico, like the English of the continent, is hospitable to new vocabulary at the same time that it maintains its phonological and grammatical integrity.
>
> Reports of teachers and supervisors alike make it clear that many children in the third and fourth grades, and some in even higher grades, still cannot read Spanish. It would seem wise to avoid having Puerto Rican children who cannot read Spanish begin work on written English. Reportedly in the high schools there is very little coordination of the work of English teachers with

> that of Spanish teachers. It would seem that both languages would gain from a certain amount of coordination at all levels. The teaching of grammar in both languages, for example, would gain if agreement on terminology could be reached.
>
> It is clear that materials for teaching English are better developed and better distributed than those for teaching Spanish. Obviously this should not be the case. More than a decade ago, in "Problemas de educación en Puerto Rico" (1947) and again in "Problemas de lectura y lengua en Puerto Rico" (1948), Rodríquez Bou and his collaborators pointed out the need of more and better Spanish readers, basic and supplementary, for the schools of Puerto Rico; and their monumental "Recuento de vocabulario español" provides one of the basic tools for use in the making of readers in Spanish. Beresford L. Hayward has more recently urged that materials for use in the teaching of reading in Spanish should be developed as rapidly as possible.[56]
>
> It is difficult to escape a strong impression that Spanish teaching in the schools of Puerto Rico suffers also from the prevalence of mistaken ideas about what Puerto Rican children need to learn in their work in Spanish. Thus it is disturbing to find one second-grade teacher, in a remote rural school, devoting precious time to drilling her children on pronouncing the *s* of *trajes* and not pronouncing the *h* of *hijo*, and even more disturbing to be told by a teacher in a private school that her children needed to be taught pure Castillian Spanish first of all. In Spanish in Puerto Rico as in English on the continent, what is needed is not elegance or direct attacks on the dialect of the home and the community, but ability to read materials of increasing difficulty and to write with increasing effectiveness. Puerto Rico is fortunate in having available advanced training of the very highest quality in Spanish grammar and related subjects, but some of those who teach Spanish in the schools show no evidence of exposure to anything of the kind.
>
> Spanish should be granted the primacy, clearly and honestly. But at the same time it should be remembered always that English does have exceptional importance in Puerto Rico, and will continue to have exceptional importance. Even an independent Puerto Rico, like an independent Cuba or Mexico, would look north as well as south—partly because of the predictable growth of such businesses as tourism, and party because many Puerto Ricans are already settled in the States and would remain there.[57]

Besides these views Dr. Long added in the same report:

> A series of English readers, with teaching aids, should be made. These should be carefully thought out, with attention given to interest, value of content, and effectiveness of style, not merely to vocabulary and grammatical structure.
>
> There should be experimentation with the use of recordings, motion pictures, and television as methods of bringing satisfactory models of spoken English to children in the lower grades. Here again the language should be used to communicate subject matter of genuine interest to the listening children, very possibly in the form of short plays with child actors the age of the listeners. The use of English-language films as supplementary materials should be encouraged in the higher grades of the elementary schools and in high school.[58]
>
> Changes should be made cautiously, and experimentation should always involve the collaboration, as Fife and Manuel urged, of psychologists and specialists in language.[59] Any appearance of sudden reversal of direction in the program is always undesirable: it is of extreme importance that what has been built up laboriously with many years of effort be utilized. The problems to be solved are complex ones. The attack made on them should be energetic but never reckless. A considerable degree of humility is necessary.[60]

II. OTHER SIGNIFICANT FACTORS IN THE DEVELOPMENT OF EDUCATION IN PUERTO RICO AND THEIR RELATIONSHIP TO THE UNITED STATES

PEOPLES' FAITH AND INTEREST IN EDUCATION

The attitudes of the people in the development of a free public school system are determining factors in its orientation. Care should be taken, when passing judgment on these expressions, that they represent the voice of the enlightened citizens and the majority of the people and not that of the most vocal or articulate minorities.

> Twelve days after the American Flag had been raised at the Fortaleza the first step in behalf of public education was taken by a number of representative citizens who met in assembly at the San Juan theater October 30, 1898.
>
> "As regards public education, the best means of advancing our people would be kindergartens and normal schools as established in the United States. Our elementary and superior schools should be transformed and graded according to modern pedagogic methods. Secondary instruction should be a continuation of the primary and a preparation for the superior and collegiate. Universal education should be introduced on the best models of the United States. There should be established schools for adults, Sunday schools, schools of arts and trades, libraries, museums, academies of fine arts and literary clubs. Education must be obligatory and gratuitous and it must be compulsory on every municipality to sustain its own schools, the number being fixed by law with reference to the population. If the municipality be unable to support all the schools, the State should establish the necessary ones. Grades of instruction should be three—the fundamental or that given by the public schools; the secondary, which should give positive notions on scientific, civic and technical subjects; the professional, which comprehends the knowledge of jurisprudence, medicine, engineering, and technology, the universities to diffuse general knowledge of science for purpose of high culture. For the formation of a competent body of teachers, it is necessary to establish normal schools for teachers of both sexes, normal schools for professors, normal schools for university teachers, and military and naval schools." [61]

These high hopes did not take into consideration that there were no adequate economic and human resources to put them into operation and that there were but very few trained teachers, extremely inadequate physical facilities, no textbooks or teaching materials, and that by the mere fact of a change in colonial government these hopes could not be changed into a plan of action.

THE FIRST SCHOOL LAWS

The first school laws of Puerto Rico under the Government of the United States, as they were an attempt to organize a system of public, free, compulsory schools need to be summarized here.

A law of May 1, 1899:

(*a*) Established school boards. The military government tried unsuccessfully to establish school boards in 1898, but the attempt was given up in favor of the present highly centralized school system, with practically no citizen participation. (We refer to this topic again in topic number 3 below.)

(*b*) Defined public schools, rights of pupils, the school year and its divisions.

(*c*) Abolished the fee system.

(*d*) Made the public schools entirely free to pupils of all classes and degrees.

(*e*) Established a graded system of schools in towns.

(*f*) Prescribed a legal course of study.

(*g*) Determined the legal qualifications of teachers in the primary and secondary schools, and the university, and payment of the same.

(*h*) Authorized the provision of free textbooks for the public schools.

(*i*) Defined the relation of the municipalities to the public schools.

(*j*) Authorized the establishment of high schools, a normal school and the organization as a professional school of the University of Puerto Rico.

(*k*) Provided rules and regulations governing the finances and accounts of the bureau of education.

ESTABLISHMENT OF INSULAR BOARD OF PUBLIC INSTRUCTION, AUGUST 2, 1899

The system of school boards was a complete failure. There was no tradition of public and civic participation in solving community problems, or in school management. The Spanish tradition was paternalistic and hierarchical as exemplified by the key institutions at work—family, Government, church, army, landowners each of whom functioned as a big "pater familiae". Somebody above "solved" the problems, somebody below asked "a father" to solve the problems.

Dr. J. J. Osuna thus states the problem of the two cultures coming together so suddenly:

> The aim of the American educators should have been to establish a system of public schools, based on local psychology, adapted to local needs; a system of public schools embracing American ideals of education and yet adapted to a Latin American civilization, and capable of being put into operation in such a civilization. But on the contrary the representatives of the United States, transplanted the American school system to Puerto Rico irrespective of conditions differing from those of the States.[62]

Dr. Pedro A. Cebollero, in his doctoral dissertation, refers to this period in our educational development pointing to the fact that Commissioner Brunbaugh thought that the school system would be a proper instrument to prepare the Puerto Ricans for Statehood and that "patriotic exercises held in the schools could foster the attainment of the aim."

> With a rather naive faith in the efficacy of such means for the promotion of Americanization, he made the following report to the Governor of Puerto Rico:
>
> "In almost every city of the island, and at many rural schools, the children meet and salute the flag as it flung to the breeze * * * The pupils then sing America, Hail Columbia, The Star Spangled Banner, and other patriotic songs. The marvel is that they sing these in English. The first English many of them know is the English of our national songs. The influence is far-reaching * * * Washington's Birthday exercises were proposed and outlined by this Department in a circular letter to the supervisors * * * The exercises were a fitting occasion to display their patriotism and their school training. In each case the exercises consisted of patriotic songs and speeches on Washington and on patriotism by the people * * * At least 25,000 children participated in these exercises and perhaps 5,000 citizens joined in the patriotic demonstration. These exercises have done much to Americanize the island, much more than any other single agency. The young minds are being molded to follow the example of Washington * * * These exercises more than any other agency will aid in the speedy advance of these people to statehood."[63]

TEACHERS SENT TO THE UNITED STATES TO STUDY

(*a*) During the summer vacation of 1899, 48 Puerto Rican teachers were granted Government transportation to the United States in order that they might study the English language and American school methods.

(*b*) The States of New York, Vermont, New Hampshire, and Minnesota offered free tuition to Puerto Rican students in their normal schools, and the Chautauqua Assembly granted a like privilege.

(*c*) Picked youths from the public schools were sent to preparatory schools in the United States. By the summer of 1901, 219 pupils had been sent north.

(*d*) In addition, some English teachers were brought to Puerto Rico.

(*e*) Teachers conferences and meetings were organized.

(*f*) Professional reading courses were instituted.

(*g*) Study and travel in the States was provided (1904).

(*h*) Commissioner Lindsay made arrangements with the presidents of Harvard and Cornell University to have about 500 teachers study in their universities during a summer school of 6 weeks. He also made arrangements with the War Department to have them transported to the United States at a charge of $1 a day while on the Government transport.

COEDUCATION

The Americans came to Puerto Rico from a country where the boys and girls went to school together, where women enjoyed greater freedom than in many other countries of the world, and where there was no appreciable difference of intellectual, social, and moral standards between men and women. They came into a civilization where it was thought morally wrong (and socially inconvenient) for boys and girls to go to school together, where woman by tradition was destined to submit herself to the will of man and where there was a marked contrast between the intellectual, social and moral status of men and women.

To establish an American coeducational system of public education in such a society was to accomplish that which Spain and even all Europe had not yet accomplished; it was to step in a day over centuries of Old World traditions, prejudices, and customs. But the coeducational system was established, and for the best, in only two decades it has so raised the intellectual, economic, social, and moral status of women that they are becoming more and more the equal of men economically, while every bit their equal intellectually and socially.[64]

IMPORTANCE OF STUDIES REQUIRING MANUAL ACTIVITIES

The traditional professions in Puerto Rico and in most European and Latin American countries were law, medicine, the priesthood, and pharmacy for men, and teaching services, and embroidery for girls. There was high regard for learning and learned individuals, especially those interested in literature and the fine arts, who came to be classed as "intellectuals." This lead to highly humanistic, verbalistic, formal intellectualized curricula. There was scant scientific tradition, and professions which required technical or vocational skills were held in low esteem. With such occupational distinctions, any work requiring manual activity was barred from an upper class society of means, as a general rule, and it was considered not proper for the sons or daughters of the rich even to get their hands dirty in the perfomance of a manual task. Hence it was important to institute studies of manual training, home economics and agriculture, not only as a means of bringing about better home conditions, but also to transform the viewpoint of the people on manual labor, to exalt the dignity of labor and to show that in these "humble" occupations lie hidden possibilities of professions as honorable as any of the traditional ones and in some cases more remunerative.

TEXTBOOKS AND PRINTED MATERIALS

One of the main features of American education is the preoccupation with the constant revision of the school curriculum. Part of this revision includes the importance attached to books and written materials and their adequate utilization.

> On the arrival of the American school authorities, they found such textbooks as "Epitome of Spanish Grammar;" "Grammar of the Spanish Royal Academy;" pamphlets on the rules of syntax and orthography, several catechisms of the church; several books on Bible history, mostly in catechism form; a small geography of Puerto Rico and a general geography of Palucia; a short history of Spain in catechism form and several readers such as Juanito and Carreño. Such books could not be used with the establishment of the new public school system.
>
> * * * one of the first things American publishers did was to have standard American textbooks hastily translated into Spanish. For lack of something better many of these were adopted, but none of them had been prepared with special view of the needs of the Island.
>
> * * * Readers with stories on sleighing and skating parties could not be appreciated by the children as well as if they had treated of swimming parties or even picnics * * * and problems of arithmetic on apples, peaches, pears, bushels, and what not, could not be appreciated by the children as if they had been on bananas, nísperos, aguacates, oranges, and fanegas or quintales.[65]

From 1906 to 1911 a slow development for the production of books adapted to the insular environment was started. But most of the books continued to be American texts. The tendency was to copy, adapt, and imitate. The report of the International Institute of Teachers College, Columbia University, 1926, states:

> Both the Spanish and English books reflect continental culture. Indeed, the whole course of study has been patterned on the curriculum of the schools of continental United States. It is the judgment of the Commission that this practice should be modified. The materials inculded in the reading books should be constructed to fit Porto Rican conditions. The children are living in an environment which is unlike that of most of the children of continental United States. Social customs are almost foreign. The Porto Rican people have a unique personality that should be preserved and their culture should be developed and passed on through a curriculum peculiar to it. That means that, instead of adopting reading books made on continental models the character of the material included in the reading books should be determined completely by the modes of living and the problems and conditions of the Porto Rican people.[66]

In 1947 the research division of the superior council on education made a study of the textbooks in use in the schools of Puerto Rico. Although there had been some improvement, still old translated or adapted books were too much in use, the quantity and quality was deficient, and most books and reading materials were the same as those used in the States—not adapted to the interests, experiences, attitudes, ideals, and customs of the children of Puerto Rico.[67]

The Institute of Field Studies of Teachers College, Columbia University in its survey of 1948–49 on "Public Education and the Future of Puerto Rico: A Curriculum Survey," reports:

> Information on the printed materials for instruction purchased by the Insular Department of Education for that year (1946–47) shows that 267,611 books were purchased by the department; that 145,803 or 56 percent of these, were in

> Spanish; that 121,808, or 44 percent were in English. They had originally been prepared for continental pupils.[68]

This report further adds:

> These books written in Spanish, like those prepared in English, do not in most cases deal with the culture and life of Puerto Rico * * *
>
> The books dealing with citizenship and science were largely in English and were published by textbook companies for the schools on the Continent. * * * The books used by the high school students, except those for Spanish classes, are usually written in English and published in the United States.[69]

In 1948–49 more materials were developed, but—

> * * * approximately one-third of the printed materials used in the elementary and junior high schools are written for children on the Continent, while with the exception of the books used in Spanish classes, all high school texts are prepared for youth in secondary schools in the United States.
>
> Puerto Rican children spend much time reading about little boys and girls in the United States riding tricycles, playing in boats, and having luxurious doll houses in spacious playrooms. At the only time during which thousands of the children will have an opportunity to learn how to live better lives in Puerto Rico, they are spending long hours of each school year reading about haystacks, steam shovels, skating on the ice, and sliding down hill in the snow.
>
> In the urban junior and senior high schools through the Island * * * youth have printed materials in social studies which deal only with the history and government of the United States and with the trends in world government. The pupil reads materials dealing with the colonists' arrival in America, the establishment of the new country, the rivalry between the North and the South, and the emergence of the United States as a world power. Because of the relationship existing between Puerto Rico and the United States, and because of the importance today of world understanding, materials dealing with the government and history of the Continent should be available to these children, it is true. However, it is unrealistic to expect an educational program to meet the needs and abilities of children in Puerto Rico unless most of the materials deal with the development of Puerto Rico, its culture, its government, its socio-economic problems, its relationship with the United States, and its role among Latin American nations.[70]

So it goes in science materials, in public health, and all other fields.

The problem of textbooks prepared for the United States is further complicated by their grade-level designation. Books prepared for a certain grade level in the United States are not suited for those levels in Puerto Rico. If used in lower grades the interest level will not be appropriate.

These are the same difficulties reported in the "Study of the Educational System" published in 1961, especially in relation to textbooks used in English classes.

(*a*) The situations, experiences, activities presented are scarcely related to the Puerto Rican environment.

(*b*) Most books are not written for Puerto Rican children.

(c) The vocabulary, according to grade placement, is too difficult for our children.

(*d*) The topics, when books are placed in lower grades, result in very little interest for children.

(*e*) Similar shortcomings are found in books assigned to the intermediate and high schools—in science, social studies, history, etc.

Nonetheless there has been considerable progress in preparing books with vocabulary control, better illustrations, written in series, and closer to children's interests and experiences. Still there is a long way to go.

SEPARATION OF CHURCH AND STATE

When the American troops occupied Puerto Rico in the year 1898, they brought with them the principle of the separation of church and state and the religious freedom which is implied in the Constitution of the United States. The public schools were freed from religious influence, the Insular Government was forbidden to spend public money for religious purposes, and Protestant missionaries followed in the wake of the troops to undertake religious campaigns and to make converts.[71] Protestantism in Puerto Rico has been considered both as a liberalizing influence on the humble people and at the same time regarded by many as a significant factor in Americanization. It has been egalitarian, an important factor in education, social welfare, and a positive influence on the upbringing of children and youth. From the beginning, protestant sects and missions emphasized education and health, as exemplified by some of the institutions they founded.

MILITARY SERVICE AND EDUCATION

As American citizens the Puerto Ricans are bound to military service. During the First World War some 18,000 Puerto Rican soldiers were enlisted. Of these, 13,733 went through Selective Service. The Second World War saw 65,034 persons enlisted, of whom 59,415 went through Selective Service. The Korean conflict enlisted 43,434 of whom 37,654 went through Selective Service. Ninety-two percent of these persons enlisted voluntarily. These persons were under the rules and regulations, discipline, language, and procedures of the American Army. There is no need to specify the habits, attitudes, values, and cultural influences they were subjected to.

From the time the Universal Military Training and Service Act first went into effect and up to 1963, 350,702 Puerto Ricans have been registered with the Selective Service. Of these a total of 81,205 inductees have served their term in the service, and there were 7,625 on active duty as of the end of the year 1963. These considerable numbers of persons have been in direct conflict with and under the inevitable influence of the North American culture. The same influences affect the university students who enter the ROTC.

From 1940–41 to 1964–65, the yearly enrollment of university students of military and air sciences in the University of Puerto Rico ROTC totals 38,854. During the same period a total of 1,991 commissions were granted.

Besides these direct influences the civil population was also affected by the war efforts. The First World War brought about an intensification of the teaching of home economics, agricultural instruction, health programs, and extracurricular activities mainly centered around athletics. It is to be remembered that the first soldiers who arrived in Puerto Rico after the Spanish American War introduced many ideas on physical education, recreation and athletics in general. During the Second World War these same influences were intensified. Also during the First World War the schools participated in selling war savings and thrift stamps and liberty bonds. The Victory Boys and Junior Red Cross left a permanent impact in school extracurricular activities. Certainly civic activities, civic attitudes, community participation, fair play, and sense of cooperation are among the values which these movements impart in the school programs. On the other hand, these organizations, when misused and misrepresented, are considered as politically oriented Americanization agencies, more so when their directors do not even take pains to use the Spanish language in ceremonies, publications, signs, symbols, songs, rituals.

The educational repercussions of these wars may be judged by the number of laws approved by the Congress of the United States and extended to Puerto Rico by which thousands of veterans were able to pursue some type of education at any level of the educational system. During the period comprised from January 27, 1944, to January 31, 1965, a grand total of 15,373 veterans pursued training in institutions of higher learning (5,113 veterans of World War II and 9,869 of the Korean conflict plus 261 under the benefits of Public Law 87–815 and chapter 35); 70,804 pursued studies below college level; 1,372 received farm training and 2,639 on-the-job training. In all, 90,188 veterans improved their educational level.

> Up to January 1960 over 53,000 diplomas of elementary, intermediate and high school had been granted to veterans. Besides 6,000 certificates on trades were issued. To this must be added 14,000 general achievement tests and 15,000 classification tests. In 1947 only 4 percent of the veterans had one or more years of college education, while at the same time the academic preparation of 43 percent was one or more years of elementary school.[73]

The significance of these figures may be easily analyzed. The estimated distribution of enlisted insular personnel in the Armed Forces during World War II, by years of education, shows, for example that only 2,214 persons had some college education. These data show an increase to 15,373 or seven times the number of persons reported for World War II. There were 26,052 persons with education from 1 to 6 years of school. Although we do not have the facts by separate years of schooling after 1960, it is an outstanding fact that 70,804 veterans pursued studies below college level. Of significance is also the fact that 85,866 persons benefited by readjustment training and 2,681 on vocational rehabilitation. The amount of $336,151,296 spent in training allowance, tuition and supplies, and reporting allowance is an amount that certainly would have an impact in any educational enterprise.

POPULATION

School enrollment, provision of trained teachers, physical facilities, teaching aids and materials, lunchroom programs and their nutritional consequences, and student transportation, all are affected by the population explosion, by migration and the movement of people from the rural to the urban zone. In population matters we have generally, although endowed with reason and scientific knowledge of the facts, assumed the attitude of the ostrich that sticks its head in the sand so as not to see the problem. The increase in population will force us to keep running fast to stay in the same place socially, economically and educationally.[73]

1. *Population data and potential school enrollment.*[74]—Population projections for Puerto Rico are prepared on the basis of three factors, which, according to past experiences, have been the determinants of population changes in the island—fertility, mortality, and migration.

(*a*) On the basis of these factors the official population projection predicts that the total population of Puerto Rico will increase from 2,358,000 [75] inhabitants as of July 1, 1960, to 3,562,563 inhabitants by July 1, 1979. Population calculations prepared under the presumption of a net migration of zero persons (between 1960 and 1980) indicate the possibility that the total population of Puerto Rico by July 1979 might be 4,031,675 inhabitants and not the 3,562,563 which the official projection foretells. (See graph No. I.)

(*b*) According to the official population projection the school-age population for the elementary and secondary levels (6–18 years of age) will increase from 789,831 persons in 1960 to 1,103,884 persons in 1979; for the university level (ages 19–22) there will be an increase from 152,914 persons in 1960 to 225,426 in 1979. According to the other population projection (zero migration) these increases may be to 1,227,601 in the 6–18 years age group and to 284,262 persons in the 19–22 years age group in 1979. (See graph No. II.)

(*c*) Total enrollment from first to twelfth grade in public day schools and accredited private schools as projected by the Research Office of the Superior Educational Council, may be 1,042,363 students for the school year 1979–80, in contrast to the 1963–64 enrollment of 668,949 students. (See graph No. III.)

(*d*) The total enrollment estimate of 1,042,363 students which has been indicated for the school year 1979–80 implies that in that school year enrollment in public schools and accredited private schools of Puerto Rico may be equivalent to 94 percent of the 6- to 18-year-old population that, according to the official population projection, Puerto Rico will have by 1979. Total enrollment registered in the school year 1962–63 represented 83.2 percent of the 6- to 18-year-old population of Puerto Rico in that year.

(*e*) Projection CSE–E–6 (recommended to be adopted as the official goal for the elementary and secondary levels of the Puerto Rican school system) predicts that the enrollment in the elementary level (1st to 6th grades) will increase from 432,195 students registered for the school year 1962–63 to 628,328 students in the school year 1979–80; for the junior high school level (7th to 9th grade) it predicts an increase from 142,398 students in 1962–63 to 245,168 in 1979–80; and for the high school level (10th to 12th grade) it predicts an increase from 82,857 students in 1962–63 to 168,867 in 1979–80. (See graph No. IV.)

(*f*) In the school year 1962–63, there were enrolled in the 12th grade 25 students for every 100 that had enrolled in the 1st grade 11 years before (1951–52). Projection CSE–E–6 predicts that in the school year 1979–80 this figure will be 50.4 for every 100 students enrolled in the first grade 11 years before. Projection CSE–E–6 is the projection accepted officially in education planning.

(*g*) In 1947–48, a total of 6,550 students graduated from high school, both public day schools and accredited private schools; in 1954–55 this number increased to 10,054 students and in 1963–64 to 20,392 students. In the school year 1979–80, the number of 12th grade graduates may be 34,566 or 42,390 or 50,162, according to projections CSE–GES–2, 5 and 8, respectively, for 12th grade graduates. (See graph No. V.)

(*h*) On examining our population reality (population facts) in 1930, 1940, 1950, and 1960, we find that in 1930 the people had a shorter life span than in the subsequent decades. By 1965 life expectancy has increased considerably and the young population goes on increasing rapidly. When the school-age population is considered in proportion to the total population, it does not show sudden or great changes as times goes by. Nevertheless, when the number of school-age persons in the total population is considered, a continuous increase year after year in this number is noticed and the changes from one decade to the other are considerable. School population in the 6- to 18-years-of-age group (elementary and secondary levels) represents more or less a third of the total population and according to the official projection this proportion will continue being nearly the same in the next 5-year periods. Nevertheless, in terms of number of persons this population group will increase from 789,831 persons in 1960 to 1,103,884 in 1979.

The same thing happens with the 19- to 22-year-old population (university level). Its fluctuation in terms of proportion to the total population is not pronounced, but in absolute numbers it is predicted that it will increase from 152,914 persons in 1960 to 255,426 in 1979.

Total enrollment in public day schools and accredited private schools (grades 1 to 12) increased from 226,550 students in 1929–30 to 668,949 in 1963–64. The increase corresponding to public day schools was from 221,197 students to 606,608 and in the accredited private schools from 5,353 students to 62,341. According to enrollment predictions of Projection CSE–E–6 in the school year 1979–80, the total enrollment in these schools will be 1,042,363 students—946,466 in public day schools and 95,897 in accredited private schools. (See graph No. VI.)

(*i*) The first year enrollment in public and accredited private university level institutions in Puerto Rico increased from 3,425 students in 1950–51 to 9,915 students in 1964–65. It is predicted that this enrollment may go up to 17,873 students (Projection CSE–UI–5), 22,355 (Projection CSE–UI–12) or 27,021 (Projection CSE–UI–27) in the school year 1979–80. (See graph No. VII.)

(*j*) Total enrollment at university level increased from 1,871 students in the school year 1929–30 to 36,834 students in the school year 1964–65. It is predicted that the total enrollment at university level may be 66,196 students (Projection CSE–UT–15), 82,796 (Projection CSE–UT–27) or 100,078 (Projection CSE–UT–54) in the school year 1979–80 according to the minimum, intermediate, and maximum projections. (See graph No. VIII.)

(*k*) Enrollment coefficient at university level (relation between total enrollment and the number of persons of ages 19 to 22 years old) increased from 7.73 percent in 1949–50 to 19.26 percent in 1962–63. The three projections of university enrollment indicated before for the school year 1979–80, imply that in that year the total enrollment in university level institutions may be equivalent to 25.92 percent (Projection CSE–UT–15), to 32.41 percent (Projection CSE–UT–27) or to 39.18 percent (Projection CSE–UT–54) of the 19- to 22-year-old population that Puerto Rico will have by 1979 according to the official population projection.

(*l*) In 1949–50, 1,214 bachelor's degrees were granted by public and accredited private university-level institutions of Puerto Rico; in 1954–55 this number increased to 1,463 bachelor's degrees, in 1959–60 to 2,152 and in 1962–63 to 2,676. In the school year 1979–80 the number of bachelor's degrees that these institutions may grant will be 6,355 or 7,948 or 9,608 according to Projections CSE–GU–2, 5 and 8, respectively, for bachelor degree graduates. (See graph No. IX.)

(*m*) Total enrollment in public and accredited private university-level institutions increased from 1,010 students in the school year 1919–20 to 36,834 in 1964–65. The increase corresponding to the public sector (University of Puerto Rico) was from 744 students in 1919–20 to 24,025 in 1964–65 and that for the accredited private universities from 405 students to 12,025. According to the enrollment predicted by Projection CSE–UT–27 (whose adoption is recommended as official goal for the university level of the Puerto Rican school system), in the school year 1979–80 total enrollment for the university level will be 82,796 students—64,581 students in the public sector (University of Puerto Rico) and 18,215 in the accredited private universities. (See graph No. X.)

(*n*) In the school year 1962–63 accredited private schools and public day schools jointly enrolled in their kindergartens a total of 7,112 students. This figure is equivalent to 10.8 percent of the 5-year-old children in the population of Puerto Rico as of July 1, 1962.

(*o*) Kindergarten enrollment projections predict that for the school year 1979–80 the number of children for whom accommodations may have to be provided might go up to 36,362 (Projection CSE–K–1), 45,077 (Projection CSE–K–2) or 58,099 (Projection CSE–K–3). (See graph No. XI.) These enrollment predictions for the school year 1979–80 would be equivalent to 36.3 percent, 45.0 percent, and 58.0 percent, respectively, of the number of 5-year-old children there will be in the population by July 1, 1979, according to the official population projection.

(*p*) Of the 7,112 children who were enrolled in kindergartens in the school year 1962–63, a total of 1,586 were enrolled in the public schools and 5,526 in accredited private schools. According to the projections, in the school year 1979–80 enrollment in public kindergartens might vary from a minimum of 23,344 students to a maximum of 51,946, and in kindergartens of accredited private schools enrollment might vary from a minimum of 7,053 students to a maximum of 13,018 students.

(*q*) The additional number of teachers the educational system will need between 1965 and 1980 at the elementary and secondary levels to take care of the enrollment increases predicted would be 11,444 or 9,901 according to the two suppositions on which calculations are based (35 students per teacher in the elementary level and 30 in the secondary in the first case or 40 in the elementary and 35 in the secondary in the second case). The assumption that these jobs will be filled presupposes that 100 percent of the graduates enter the teaching professions. Actually not more than 80 percent of those persons with normal degree and about 60 percent of those with a bachelor's degree enter the teaching profession. We are not taking into this consideration those who would have to be prepared to substitute for the persons who leave school because of illness, retirement, or the attraction of other jobs. Teachers are not prepared in 1 day.

(*r*) The additional number of teachers the university level will need between 1965 and 1980 to take care of the increase in enrollment according to Projection CSE–UT–27 may be 4,122 or 3,299 according to the two suppositions upon which calculations are based (12 and 15 students per teacher).

2. *Migration.*—The problems posed by emigration cannot be more objectively analyzed than by the reports and papers presented by Drs. José L. Janer and José L. Vázquez. Both are outstanding demographers. It is enlightening to read about their views which are devoid of accommodation to political or religious considerations.

> Although net emigration has shown a distinctly declining tendency during the last three fiscal years, the net emigration of native born Puerto Ricans has continued to increase throughout the same period according to the officially recorded migration statistics. This apparent paradox is explained by an increase in the net immigration of persons born outside Puerto Rico. In 1960–61 (the only year for which the necessary data are available) over 71 percent of these non-native immigrants were of non-Puerto Rican ancestry. [See table of Composition of Immigration, *1963 Economic Report to the Governor*, p. 113.]
>
> Although it is perhaps too early to estimate what the true consequences of such a population displacement process may eventually be, if its intensity is maintained in the future, it would be well to keep a close watch on its evolution, because in the long run it may happen, that whatever achievement statistics the Island may be able to wave throughout the world as evidence of her success in her fight against poverty and socioeconomic stagnation may not be truly representative of changes in the Puerto Ricans' situation, unless all the thousands of Puerto Ricans "voluntarily" exiled in the slums of New York, Chicago and other mainland cities be taken into account. [See the tables included.]

Composition of immigration

[Periods indicated from April to April]

	1955–60		1960–63		1962–63	
	Total	Percent	Total	Percent	Total	Percent
Total	77,328	100.0	85,800	100.0	40,200	100.0
Born in Puerto Rico and born abroad of Puerto Rican descent	47,785	61.8	63,800	74.4	33,000	82.1
Born in United States of non-Puerto Rican origin	26,111	33.8	8,700	10.1	4,900	12.2
Foreign born of non-Puerto Rican origin	3,432	4.4	13,300	15.5	2,300	5.7

Annual rates of immigration to Puerto Rico

[From April to April]

	1955-60	1960-63	1962-63
Total	15,500	28,600	40,200
Born in Puerto Rico and born abroad of Puerto Rican descent	9,600	21,300	33,000
Born in Puerto Rico	7,200	16,200	26,000
Born abroad of Puerto Rican descent	2,400	5,000	7,000
Born in the United States of non-Puerto Rican descent	5,200	2,900	4,900
Foreign born of non-Puerto Rican descent	700	4,400	2,300

It is highly possible that the present political situation in some areas of the Caribbean may have had much to do with these rapid increments in immigration of non-native population, according to recent reports on the subject. But, continental Americans are also coming in relatively great numbers to the Island as technicians, skilled operatives, and businessmen. Some evidence of this current is obtained from a comparison of the 1950 and 1960 censuses. Apparently then, what has been happening during the last years has been an exchange of population on the Island and not a radical decline in emigration of native Puerto Ricans as one might infer from a superficial glance at the net balance figures.

Puerto Rican emigration, in contrast with previous overseas movements, is a two way current. Net migration, the difference between arrivals and departures, is a very small fraction of the total gross movement (arrivals plus departures). While in 1960 the total gross movement amounted to 1,339,000 persons, net emigration was only 16,000 (1.2 percent of the total gross figure). It must be remembered that there is considerable evidence that Puerto Ricans do not consider themselves permanent emigrants. They go to the United States with the hope of making some money and then coming back to buy a farm, a house, or small business enterprise and spend the rest of their lives here. They also tend to come back after retirement or when jobs opportunities are limited by age. This well known fact should move those who want to keep on pushing people off their Island to a reevaluation of their present policies under the guidance of a more humanistic socio-economic philosophy.[76]

Net out-migration: Puerto Rico

Fiscal year	*Net out-migration (Number of persons)*	*Fiscal year*	*Net out-migration (Number of persons)*
1939–40	1, 008	1952–53	74, 603
1940–41	500	1953–54	44, 209
1941–42	928	1954–55	31, 182
1942–43	2, 601	1955–56	61, 647
1943–44	8, 088	1956–57	48, 284
1944–45	11, 003	1957–58	25, 956
1945–46	24, 621	1958–59	37, 212
1946–47	35, 144	1959–60	23, 742
1947–48	28, 031	1960–61	13, 762
1948–49	33, 086	1961–62	11, 363
1949–50	34, 155	1962–63	4, 7[illegible]
1950–51	41, 920	1963–64	4, [illegible]
1951–52	61, 658		

Source of information: Negociado de Análisis Económico y Social, Junta de Planificación, "Informe Económico al Gobernador, 1964," p. 156.

Table A.—*Persons of Puerto Rican origin in coterminous United States and New York City: 1910 to 1960*

Nativity and year	United States		New York City	
	Total number	Percent of increase	Number	Percent of total
Puerto Rican birth:				
1960	615,384	172.2	429,710	69.8
1950	226,110	223.2	187,420	82.9
1940	69,967	32.6	61,463	87.8
1930	52,774	346.8	[1]	------------
1920	11,811	680.6	7,364	62.3
1910	1,513	------------	554	36.6
Puerto Rican parentage:[2]				
1960	272,278	261.8	182,864	67.2
1950	75,265	------------	58,460	77.7

[1] Not available.
[2] Born in the United States.

Source of information: U.S. census of population 1960, Puerto Ricans in the United States, final report PC(2)-ID, p. viii.

Table B.—*Characteristics of Puerto Ricans in the United States and in Puerto Rico: 1960*

Item	Total	United States		Puerto Rico
		Puerto Rican birth	Puerto Rican parentage[1]	
Total population:				
Males/100 females	100.0	99.3	101.8	98.0
Median age	21.4	27.9	5.9	18.4
Persons 14 years old and over:				
Median years of schooling completed:				
Male	8.4	8.2	10.3	6.1
Female	8.2	8.0	10.8	5.6
Percent in labor force:				
Male	79.6	80.6	70.2	65.7
Female	36.3	36.3	36.0	20.0
Median income	$2,533	$2,513	$2,868	$819
Percent single:				
Male	31.1	29.1	48.8	37.4
Female	21.9	20.1	39.2	28.6
Percent widowed or divorced:				
Male	3.0	3.1	2.5	4.2
Female	10.6	11.1	5.1	12.5
Percent enrolled in schools:				
Persons 5 to 24 years old	59.8	50.8	77.5	55.4
Persons 16 and 17 years old	61.2	58.0	74.9	47.1

[1] Born in the United States.

Source of information: U.S. census of population 1960, Puerto Ricans in the United States, final report PC(2)-ID, p. viii.

* * * our fellow countrymen have had to compete in the past and will have to compete in the future not with the 70 million persons who make up the labor force of the United States, but with the group of "non-skilled" and "semi-skilled" laborers of two cities, New York and Chicago. It is precisely at these places that unemployment is really critical in the United States. At present, 80 percent of the total of unemployed persons are within the category of non-skilled and semi-skilled workers. This, of course, is attributed in part to the radical growth of the group of unexperienced persons who are looking for their first job. This is due to a great extent also to the recent tendency towards automation in the American industry. There should be no doubt that on considering the supply in

Total number of persons of Puerto Rican birth and parentage by sex, for the United States and selected States, and median years of school completed by persons of this group of 14 years and over: 1960

Item	Puerto Rican birth and parentage	Puerto Rican birth	Puerto Rican parentage	Median years of school completed by persons of 14 years and over		
				Puerto Rican birth and parentage	Puerto Rican birth	Puerto Rican parentage
Total	892,513	617,056	275,457	----------	----------	----------
Male	446,361	307,408	138,953	8.4	8.2	10.3
Female	446,152	309,648	136,504	8.2	8.0	10.8
California (total)	(28,108)	(15,479)	(12,629)	----------	----------	----------
Male	14,451	7,077	6,474	9.1	8.7	10.1
Female	13,657	7,502	6,155	9.2	8.8	10.2
Illinois (total)	(36,081)	(25,843)	(10,238)	----------	----------	----------
Male	19,126	13,893	5,233	8.0	7.9	8.8
Female	16,955	11,950	5,005	7.3	7.1	9.3
New Jersey (total)	(55,351)	(39,779)	(15,572)	----------	----------	----------
Male	29,002	21,030	7,972	7.9	7.7	10.1
Female	26,349	18,749	7,600	7.7	7.4	11.2
New York (total)	(642,622)	(448,585)	(194,037)	----------	----------	----------
Male	313,202	215,795	97,407	8.4	8.2	10.4
Female	329,420	232,790	96,630	8.2	8.0	11.0

Source of information: U.S. census of population 1960, Puerto Ricans in the United States, final report PC(2)-ID, pp. 2-11, table 1, and pp. 12-17, table 2.

Persons of Puerto Rican birth and parentage, by State: 1960

State	Total	Puerto Rican Birth	Puerto Rican Parentage	State	Total	Puerto Rican Birth	Puerto Rican Parentage
Alabama	663	409	254	Montana	53	41	12
Alaska	562	475	87	Nebraska	333	235	98
Arizona	1,008	484	524	Nevada	179	87	92
Arkansas	207	137	70	New Hampshire	212	147	65
California	28,108	15,479	12,629	New Jersey	55,351	39,779	15,572
Colorado	844	471	373	New Mexico	433	248	184
Connecticut	15,247	11,192	4,075	New York	642,622	448,585	194,037
Delaware	773	533	240	North Carolina	1,866	1,300	566
District of Columbia	1,373	1,001	372	North Dakota	68	36	32
Florida	19,535	14,245	5,290	Ohio	13,940	9,227	4,713
Georgia	2,334	1,737	597	Oklahoma	1,398	934	464
Hawaii	4,289	1,197	3,092	Oregon	233	117	116
Idaho	60	36	24	Pennsylvania	21,206	14,659	6,547
Illinois	36,081	25,843	10,238	Rhode Island	447	305	142
Indiana	7,218	4,781	2,437	South Carolina	1,114	847	267
Iowa	226	131	95	South Dakota	124	55	69
Kansas	1,136	829	307	Tennessee	499	325	174
Kentucky	1,376	1,130	246	Texas	6,050	3,869	2,181
Louisiana	1,935	1,204	731	Utah	473	193	280
Maine	403	249	154	Vermont	108	61	47
Maryland	3,229	1,904	1,325	Virginia	2,971	2,031	940
Massachusetts	5,217	3,454	1,763	Washington	1,738	1,280	458
Michigan	3,806	2,175	1,631	West Virginia	252	106	146
Minnesota	387	176	211	Wisconsin	3,574	2,552	1,022
Mississippi	301	192	109	Wyoming	50	30	20
Missouri	940	571	369				

Source of information: U.S. census of population 1960, Puerto Ricans in the United States, final report PC(2)-ID, pp. 103-104, table 15.

the labor market of the United States, North Americans will be preferred, simply because of their superiority in terms of language, education and occupational dexterity.

Mass migration, and for an indefinite time, is an expensive solution to the population problem. Puerto Rico, up to the present, has been preparing its people, paying for their breeding, education and training, only to see how a good part of them go away to produce in another place. The only economic profit we have had in relation to the people who migrate, is that we have had less mouths to feed and occasional remittance of money to relatives or friends. In terms of averages, migration is taking away the best educated people; the average of school years completed by the migrant group was more than 8 in 1960, compared to 4½ for the resident population.

At the same time migration is fattening itself from the age groups where economic production is greatest. During the decade 1950–1960 seventy percent of the migrants were persons 15–39 years old. For the reason that it has been taking away more "arms" than "mouths", migration has resulted in an increase in the load of dependency. If we define dependents as persons below 20 years of age and those 65 and over, we find that between 1940 and 1960 there has been a great increase in dependency. In 1940, for every 100 persons in the work ages (20–64 years old) there were 122 dependents (as defined before). By 1950 this ratio had already increased to 133 and in 1960 it went up to 140. If we define dependents as those persons who do not have an employment, either because they are unemployed or because they do not fall within the working group, we find the same ascending tendency. In 1940 for each employed person there were 2.5 unemployed persons. In 1950 this figure went up to 3.0 and in 1960 we find that for each employed person there were 3.3 unemployed persons.

It seems obvious that mass migration, in the long run, even when it represents an alleviation to the population pressure, will be an ineffective, costly solution from the economic point of view.[77]

* * * Some will allege that nobody is pushed or obliged, that migration is a voluntary act. Mass migration may be a "free" movement, but not a "voluntary" one. Free, because it is true that nobody is obliged to leave his country, but it is not voluntary because the great majority of the people who migrate do it against their best wishes and volition. Masses are pushed to migrate by political conditions—as is the case of Cuba; or socioeconomic conditions, as is the case of Puerto Rico, and not by the spirit of adventure.[78]

All these and many other aspects of the industrialization and migration experience in Puerto Rico should serve to clearly establish the fact that any definite solution to the problem that a rapid population growth due to a high rate of natural increase may represent in any densely populated area must necessarily be based on measures inequivocally leading to lower fertility rates and patterns of reproductive behavior dominated by deeply rooted attitudes of parental responsibility. This, and absolutely no other, will ever constitute the one and only basis for the definite solution of population problems anywhere. Economic opportunism by itself, apart from the issue of its questionable morality will never be the answer to such problems and at most all it can do is to allow some generations to evade their responsibilities with respect to their solution by safely transferring them to the generations to come.

After all, one should never forget that the basic unit in any human society is the family. Overpopulation problems at the national level must, therefore, always be considered as the cumulative result of overpopulation problems at the individual family level. And the existence of too many overpopulated individual families in any given society should always be seen as a very clear indictment of both, prevailing attitudes of parental irresponsibility, and governmental indifference towards the prevalence of the favourable parent-child relationships so necessary to maintain, at the highest possible levels, the probability that every live birth in the community will enjoy reasonable opportunities of becoming

> an asset to it through adequate upbringing. It follows from this, that no truly democratic government can for long maintain an attitude of indifference towards the increasing needs of its citizens to receive the advice and facilities that may free them from the fear of overpopulation without seriously impairing the very basis of democratic life. This should be so, not only in underdeveloped and overpopulated countries, but in every one, for even in the most highly developed and less densely populated nations, individual families, badly in need of such help, may be found.[79]

ADDITIONAL COMMENTS

To this constant migration of Puerto Ricans, a phenomenon which affects values, habits, attitudes and old entrenched mores and taboos, as well as economics, we must add the fact that the industrialization programs, the easy means of transportation, and the shrinking of distances have rapidly increased the number of North Americans who come to live in Puerto Rico or who periodically visit the island on business. The 1960 census reports that 50,000 North Americans live in Puerto Rico. During 1963–64, a total of 1,072,037 passengers entered Puerto Rico and 1,076,403 left the island. The important aspect of this movement of persons is not the difference between those leaving and those entering the island. Those going out are affected by cultural influences in a very direct and potent way. Those coming in exert also strong cultural influences on our population. The influence of the sheer numbers, aside from the impact and force which their economic power exerts, is something to think about. When the educational and cultural forces at work were limited just to a conflict of cultures, the Spanish culture, language, and heritage did not have, really, much to worry about. Although some claim that all the Americanization schemes tried through the school system have failed, it must be said frankly that the cumulative influences of all those schemes in the long run have weakened our cultural patterns, our personality make up, our habits and attitudes in ways not yet clearly discerned. It is equally true that some new values, ideals and attitudes have enriched our lives.

In a recent study by Mr. and Mrs. Bourne the conflict of cultures is discussed.

> Puerto Rico exhibits an essentially nationalistic position in its desire for self-government and in its pride and conscious devotion to its own cultural patterns. But, Puerto Rico is part of the Untied States, not only politically, not only through financial and economic ties, but also because of the impact of United States culture on the culture of Puerto Rico. This is reflected not only in practical involvement in interests outside its own boundaries but in a complex cultural pattern. This impact is sometimes clearly recognized, accepted and internalized, sometimes felt and unconsciously accepted, sometimes rejected politically and intellectually, but always present.[80]

When this clash of cultures took place earlier in the insularism we lived in, when we lacked outside contacts, quick communication, English radio and television programs, English newspapers, magazines, phonograph records, motion pictures, and books (except for the few who could afford such luxuries) the clash of cultures could have continued to "the millennium" without the Puerto Ricans losing much ground. But when all the above-mentioned forces of one of the cultures not only exist but are further strengthened by the economic ramifications of industries, movies, radio, and television stations, chain stores, the movement of hundreds of thousands of tourists, dozens of night clubs whose shows are mostly in English, buy thousands of English records (Beatles and all), the imitation of teenage rhythms and dances, garments, costumes, symbols, and behavior about which all the means of communication give account, the struggle begins to be one of gradual but sure weakening of the Puerto Rican culture. This happens irrespective of the fact that all cultures are being affected by other cultures in this shrinking world of ours. Instead of the romantic attachment to a pattern of thinking which idealizes a pure culture around which we need to throw an immunizing Iron Curtain, we should take pains to identify and strengthen what is worth keeping of our culture, traditions, habits, and values and to reason out why these should be worth fighting for. To what is new we should apply the same criteria of excellence, of usefulness, of capacity for enrichment of what we realistically hold as worth preserving. Otherwise it will be a struggle of frustrations, ambivalence and rationalization which will keep us arguing emotionally for decades to come. The transformation in cultural patterns, the changing of habits and behavior will take place to some extent, anyway, irrespective of final political solutions. The Puerto Ricans would do well to help guide the healthy changes and not be pushed by them.

The school system needs to develop an adequate philosophy of education which will do something positive to strengthen all that is of value in our culture, accept from other cultures what enriches ours, and develop procedures of analysis and understanding of these cultural transformations, or as sociologists say, processes of transculturation. The contact with other cultures and different languages, under a well-guided and soundly motivated and planned program, inevitably will have an enriching influence on our culture, which is to say, on our lives. The drifting attitude assumed by the government on matters of values, culture, and personality structures, and the lack of a sound, clear and understandable philosophy of education, not only of the formal school system but of education in general, the ambivalence and insecurity which permeates all our expressions, and the defensive attitudes and aggressiveness which we witness in every day human relations, will continue to plague us unless a policy of orientation and direction is well programed and executed within the framework of democratic procedures, principles and institutions.

The Bournes, in their "Study of Thirty Years of Change in Ten Selected Areas of Rural Puerto Rico," wrestle with this problem.

> The attitudes we find are clear and cogent illustrations of the gap which exists between Operation Bootsrap and Operation Serenidad, to enjoy the convenience of running water, to have health and vitality, to see the possibility of better jobs, to have a road to the nearest town—all these for most people are easy to accept. To understand that these very things bring with them problems of modern life, the discovery that values of the past are often inapplicable to the present, is a painful difficulty for adults, a problem for the social psychologist as well as the sociologist and anthropologist. For the young people who face the situation of the present without the perspective which memory of the past brings may seem a more simple matter, but it is in fact more complex. The past is theirs too, in history, tradition and in their relationship to their parents; they must live in the present and for the future; because they cannot go back, even in memory; they must somehow deal with things as they are; they must assimilate the meaning of the past from which the present comes.[81]

[This is why, an effective, well-planned, and exceptionally well-executed program of cultural clarification and reinforcement is being put into action by the Institute of Culture.]

I state at this time that the population explosion, explained only in statistical terms, does not reveal the magnitude of the task we are facing now and which we will have to face in the next decades. The violent changes that occur in society make the knowledge acquired yesterday obsolete. With respect to this, anthropologist Margaret Mead says:

> Within the lifetime of ten-year-olds the world has entered a new age, and already, before they enter the sixth grade, the atomic age has been followed by the age of the hydrogen bomb * * * Teachers who never heard a radio until they were grown up have to cope with children who have never known a world without television. Teachers who struggled in their childhood with buttonhooks find it difficult to describe a buttonhook to a child bred up among zippers * * * From the most all-embracing world image to the smallest detail of daily life, the world has changed at a rate which makes the five-year-old generations further apart than world generations or even scores of generations were in our recent past than people separated by several centuries were in the remote past. The children whom we bear and rear and teach are not only unknown to us and unlike any children there have been in the world before; but also their degree of unlikeness itself alters from year to year.[82]

It would be convenient to ask not how many teachers take additional and required courses in methodology, but what is being done to prepare teachers in large numbers so they can prepare themselves and enhance their teaching to face properly the rapid and violent changes we are continuously witnessing. It is being affirmed at this moment that the problem does not consist in preparing teachers so they teach what we know, but in how we are going to prepare them to teach what we do not know. In other words, "the central mission of elementary, secondary, and nigher education must become, then, not teaching youth what they need to know, but teaching them how to learn what is not yet known." [83]

Implications of a philosophical and sociological type lead us to ask ourselves whether we should be content to continue planning in all respects in order to have more of what we have today, that is, to go on producing the same type of society, with the same conditions, with the same characteristics we now have; or whether we should plan instead for a society the profile of whose image will have to be traced on the basis of the positive changes we want effected in our present society. We will have to form that new image much more on the basis of investment in people than on investment of capital or accumulation of savings in the banks, though we recognize that is needed but far from sufficient.

It is worthwhile to quote John Kenneth Galbraith on this problem. He reminds us of the fact that "technological change is the result not of amassing capital; it is the work of human beings. An increasingly, of course, it is the result of a deliberate and purposeful investment in human beings." [84]

In other words, in an economy which is expanding, the human capital, measured in terms of the skills and education offered and that the people possess, is the principal factor which makes it possible to attain a rate of ascending growth, not only in material aspects, but also in those values and principles of living together which, after all, constitute the reason for existence of every human being and every civilized community.

CHANGES FROM AN AGRARIAN TO AN INDUSTRIAL ECONOMY

Puerto Rican society during the Spanish regime centered around agricultural activities. It was a predominantly static society. The elite, composed of landowners, prosperous merchants, high ranking bureaucrats, the ecclesiastical hierarchy, the professional groups, and the military, controlled and influenced life in the colony. The masses of the population were composed of laborers, dispossessed agricultural workers, and skilled and unskilled workers. Mobility was difficult within this stratified society. Wealth was poorly distributed. Education was the privilege of the few who could afford to send their children to foreign universities, mainly to Europe.

With the establishment of the universal, free, and compulsory system of education, egalitarian, and open to men and women alike; with the establishment of cultural and economic relationship with the United States; with the establishment of political parties which gradually evolved free, democratic, electoral processes; and with the industrialization of the island, the school system as well as all the other educational agencies have felt the impact of the influences generated by these changes.

The system of free enterprise, American pragmatism, feminist movements, the freedom of teenagers and adolescents, the love of comfort,[85] the emphasis on the value of time and money, and the liberal conception of sexual relations are influences to be reckoned with.

Since 1954–55, income produced by industrialization has surpassed agricultural income. This, in turn, has accelerated rural migration to urban centers. A new, vigorous, economically strong middle class is on the increase.

> Industrialization, urbanism, technology, transculturation, expansion of organized educational facilities and the increase of family income, have created during this century new problems of living.[86]

Other problems such as weakening of family ties, an increased rate of divorce, increase in juvenile delinquency, illegitimacy, and school dropouts, are significant factors which are affecting the tasks and programs of the school system in Puerto Rico and of education in general. If we add to these aspects the impact of the economic factors on our cultural ways, the influences exerted by advertisement and public relation agencies on the way of thinking and acting of the population and by the new ways introduced by chain stores, supermarkets, industrial complexes, easy communication, and radio and television; we may come close to realizing the challenges that education has faced and is bound to face increasingly in the future. These changes have affected and will continue to affect the curriculum, the administrative organization, the offerings, the training of teachers, the materials of instruction, and the physical facilities of the school system. Above all, values and philosophy, already in a state of ambivalence, will have to be reexamined squarely.

> On education—and here we use education in its broadest sense—lies the burden of interpretation, the painful responsibility of bringing to all Puerto Ricans an understanding of the problems they face and, if Operation Serenidad is to become a reality, the conscious facing of those problems. Conflict must be brought into the open and must move toward some new consensus.[87]

LITERACY AND ADULT EDUCATION

Literacy.—In the year 1890 in Puerto Rico, 79.6 percent of the population was illiterate. This figure was reduced only 1.2 percent during the next decade; that is, by 1900 there were still 78.4 percent illiterate. From there on the percentage of illiterates has been reduced by 11 percent every 10 years, except for the decade 1940–50. According to the census of 1950 there were still 25 persons out of every 100 (24.7 percent) who could not read or write.

The average education for persons 5 to 24 years old in Puerto Rico was 3.1 years according to the 1950 census figures. The average schooling of those 25 years old and over was 3.7 years. For the same year we had 1,526,154 persons 10 years of age or older. Of these, 362,058 were illiterates and 364,008 had from 1 to 3 years of schooling.

It should be remembered that due mainly to the economic situation prevalent in Puerto Rico before 1940 only about half of the school age population was in school, dropout rates and school failures were high. Many persons had barely a first or second grade education since a large number of the schools available were organized under the double enrollment or interlocking schemes. As the economic conditions improved there was need to open educational facilities for those who in their childhood did not have them or were forced too soon to leave school. There were in existence a few programs for adult education, but new ones were started opening new avenues of learning to adults. Other programs which increased the educational level of the adult population were sponsored and paid for by the different laws relative to veterans of wars.

The industrialization program, the mechanization of agriculture, the increase and complexity of commercial practices, and the rapid social changes which began to alter things as they were, led the government to approve and develop a literacy program that would open new educational opportunities for those who had been unable to profit by the regular day school. In May 1953 the legislature of Puerto Rico approved such a program.

Between 1953–54 and 1958–59, this literacy program enrolled 202,459 adults in the rural and urban zones of the island. Illiteracy was reduced to 16.6 percent by 1960. Illiteracy may be now (1965) if our estimates prove correct, around 13 percent.

At the same time that the literacy program was launched, it was necessary to reorganize the adult education program in the elementary, intermediate, and high school levels.

Elementary education for adults.—From the year 1953–54 to 1963–64 the cumulative enrollment in this program has been 304,801 persons. Out of these, 126,340 were from the urban zone and 178,461 from the rural. The average holding power for the last 10 years has been 71.1 percent. The number of sixth grade diplomas granted has been 14,733. The average age of adults enrolled in the elementary schools fluctuates between 24 and 25 years of age.

Secondary schools for adults.—In secondary schools for adults a notable increase has also been witnessed. In 1955–56 the program enrolled 12,062 students; 6,699 in grades 10 to 12 and 5,363 in grades 7 to 9. By 1964–65 enrollment increased to 19,589. The intermediate school enrolled 7,631 students and the high schools, 11,958. There has been an average increase of 760 students per year for the last 10 years. The cumulative enrollment in secondary schools from 1955–56 to 1964–65 has been 128,342. During the last 9 years the secondary school program has issued 12,523 ninth-grade diplomas and 12,428 high school diplomas. During 1964–65 some 1,400 intermediate and 2,500 high school diplomas will be granted. The average age of these students is 19+ for intermediate school and 21+ for high.

English program for adults.—The English program for adults has enrolled 105,169 students from 1953–54 to 1963–64. In the rural zone 67,086 were enrolled and in the urban 38,083.

English program by television.—The English program by television enrolls an average of 3,500 students per year. It has been in operation for the last 5 years.

English program for agricultural laborers in the United States.—There is also an English program for adults which functions in the United States, especially in laborers' camps. It has an enrollment of 2,000 and has enrolled some 10,000 adults during the last few years.

Reading program by television.—There is a reading program through television for new literates. It enrolls 399 persons.

Extension service and free examination.—The division of extension of the Department of Education has an enrollment of 12,922 in the 12th grade and 2,282 in the 9th grade. It has also given placement tests to 8,921 ninth graders and to 3,296 sixth graders. It has offered free examinations to 16,126 students of whom 4,978 got their certificates.

Library services.—Library services have had a significant increase in Puerto Rico in the last years. Eight bookmobilies carry books to 257 communities. These bookmobiles during 1963–64 loaned a total of 500,594 books. There are 33 libraries in public housing projects. There are 291 mobile libraries that are sent to rural communities. There are 115 school libraries administered by the library services. Law 86 of 1955 (as amended) provides $4 for each dollar assigned by the municipalities for public libraries. Eleven municipalities have already taken advantage of this plan. Over 1 million persons are served by these library services and more than half a million books are in use.

COMMUNITY EDUCATION PROGRAM IN PUERTO RICO

The division of community education, an agency of the Department of Education, was created in 1949 by Act No. 372 of May 1949. As stated in the preamble of the law that created the division:

2

The goal of community education is to impart basic teaching on the nature of man, his history, his life, his way of working and of self-governing in the world and in Puerto Rico. Such teaching, addressed to the citizens meeting in rural and urban communities, will be imparted through motion pictures, radio, books, pamphlets, posters and group discussion. The object is to provide the good hand of our popular culture with the tool of basic education.

In practice this will mean giving to the community the wish, the tendency and the way of making use of its own aptitudes for the solution of many of its own problems of health, education, cooperation, and social life through the action of the community itself.

The community should not be civically unemployed. The community can be constantly and usefully employed in its own service, in terms of pride and satisfaction for the members thereof.

Goals of a community education program.—The accomplishment of these aims is the principal task of the division of community education. They are as follows:

1. To help the families of a community through a living experience to have faith in themselves and in their neighbors.
2. To help them understand that through their own efforts and contributions they can create a dynamic community.
3. To awaken them to the realization that the right to participate and the right to decide what is "good" for their community is theirs.
4. To orient them in developing the processes of group discussion in meetings where democratic participation is guaranteed.
5. To help them develop the habit of scientific examination of their problems by seeking the best technical knowledge available.
6. To help them when solving a problem to mobilize democratically all material resources from within the community before looking elsewhere.
7. To help them discover the strength and satisfaction that comes through the concerted action of all, based on sound planning arrived at in open discussion.
8. To help them realize that common action such as that described above is the only base upon which active and responsible leadership can develop, and that the right to select this leadership is theirs and theirs alone.
9. To help them understand that it is ordained by the nature of growth that progress, as a result of common action, causes new needs which require greater efforts.

Administrative organization of the program of community education.—The community education program has a director, a field and training section, with supervisors and group leaders. It also has three other sections: Analysis, administrative and production. This last one is in charge of cinema, graphics, and editorial work.

The field and training section is in charge of the selection, training, and supervision of personnel to work directly with the program in the community.

The analysis section provides information that aids in the development of the program. This section is responsible for the evaluation of the program in terms of its basic objectives.

The group leaders.—The field work of the division is carried on by group organizers. One of their jobs is helping the neighbors understand that the solution of their problems is a responsibility of the entire citizenship working together democratically.

For this purpose community meetings are held regularly. At these meetings neighbors listen to the opinions of others stated freely; they learn to speak without bias; they plan together. Agreements are reached through a consensus following the discussions. The decisions must come from within the group. Technical knowledge upon which to base the decision is given before the decision is made.

The group organizer acts as a group discussion leader, not as a leader of the community.

During the school year 1964–65, the division had 65 group organizers and 10 supervisors. Each group leader was in charge of eight communities. (A community is composed of six families.)

At the present time the group organizers work in the rural area only. However the division has been studying for some time projects for the urban zone.

VOCATIONAL EDUCATION

Prior to 1920 there was not a vocational education program on the island, although vocational subjects—manual training, home economics and agriculture—were taught as special subjects. In 1931, with the extension of the Federal vocational legislation to Puerto Rico, vocational education was organized as such and pursued in accordance with the philosophy and the standards required by Federal legislation.

The vocational education program is administered by the Commonwealth board for vocational education. This board is composed of the Secretary of Education, the Secretary of Agriculture, the Secretary of Commerce, the Secretary of Labor, the director of agricultural extension services, the administrator of the economic development administration and three other members who are appointed by the Governor. The Secretary of Education is the president of the board. The board is responsible for the administration, supervision, and development of vocational and technical education in the island.

The vocational education program offers courses in industrial arts and home economics which are considered part of the program of general education, courses in agriculture, business education, distributive education, arts and trades, and human resources. It is now beginning courses in hotel personnel in the hotel school. All these courses are offered to prepare students for an occupation. It also offers counseling in high school, both for students in the general courses and for those in vocational courses.

The program also provides many courses for adults, often through extension service programs for employed persons, in such areas as the following: Practical nursing, technical information (in cooperation with the Department of Labor), fishing techniques, arts and trades (in cooperation with the economic development administration), trades to develop human resources (with the cooperation of the Department of Labor), preparation of waitresses, porters, and cooks.

To comply with the demands of the industrialization program for skilled and semiskilled workers and with the trend to mechanize agriculture the program has offered new courses and training opportunities. Training is offered to young and adult farmers in driving, operating, and maintaining mechanized agricultural equipment. Courses for cashiers and food packers have been given. A technological institute was established to prepare personnel for laboratories, research centers and industries where work of a technical nature is done. Courses in electronics technology, mechanical technology, air conditioning technology, and civil technology have been offered at this institute.

One can get an idea of the extent of this program by looking at the enrollment figures in vocational courses in 1963–64. In the day program in schools of trade and industries, 7,307 students were enrolled. A total of 11,508 pupils took courses in business education in the senior high schools. Adults took advantage of vocational education courses: 3,448 enrolled in special vocational training courses, 3,298 in agriculture, 4,216 in home economics, 3,194 in distributive education and 36 in industrial arts.

The financial resources available for this program in the last 5 school years were as follows:

Year	*Resources*
1960–61	$5, 051, 419
1961–62	5, 632, 588
1962–63	6, 448, 066
1963–64	7, 824, 238
1964–65	10, 118, 555

The following percentages of the total resources available for this program during these 5 years were Federal funds: 1960–61, 25.7 percent; 1961–62, 25.5 percent; 1962–63, 34.0 percent; 1963–64, 37.7 percent; 1964–65, 49.9 percent.

The number of students who took advantage of the vocational programs was as follows:

Year	Enrollment	
	Regular vocational high schools	Regular day school students taking some vocational courses
1960-61	6,426	90,870
1961-62	7,207	96,384
1962-63	7,049	93,048
1963-64	7,502	92,806
1964-65	7,700	97,034

The total number of students benefiting from this program represented the following percentages of the total junior and senior high school enrollment for these 5 years: 1960–61, 52.3 percent; 1961–62, 53.0 percent; 1962–63, 49.5 percent; 1963–64, 48.2 percent; 1964–65, 49.2 percent.

In addition to these young people, the following numbers of adults took advantage of the offerings of this program in the last 5 years: 1960–61, 24,157; 1961–62, 20,236; 1962–63, 24,187; 1963–64, 29,768; 1964–65, 34,558.

In 1965–66 the vocational education program has a budget of $10,861,308. Of this amount 46.6 percent comes from Federal funds. The secondary vocational schools expect an enrollment of 8,740 students and the program expects of offer opportunities of study to an additional 99,890 students from the regular day schools and 35,030 adults.

As stated elsewhere in this report, vocational education not only opened new opportunities for students not interested in the general or academic program, but also helped to dignify manual labor and skill work at the same time that it increased the employment opportunities of individuals who could not enter university studies.

The improvement of community life in the rural areas where second unit schools[88] offered vocational agriculture, home economics, woodwork, and handicrafts, owes much to the vocational education program. The initial supply of skilled and semiskilled laborers for industry came, generally, from these programs. The on-the-job-training of adults, the retraining of displaced workers, the improvement in farm practices, dietary practices, and homemaking have been a remarkable achievement mainly of vocational education.

The vocational education program has helped also to decrease school dropouts, giving attainable goals to a larger number of pupils. It has helped improve rural education in Puerto Rico. Through farm work, home economics, social work, handicrafts and the different clubs and societies for young people, and farmers and housewives, the rural second unit, mainly characterized by vocational courses, turned the schools into community centers.

> One of the purposes of these schools was to encourage the growth of a sense of community as a step toward group action, toward a new relationship of neighbor to neighbor, based on common needs and interests. * * * It was a step away from complete dependence on the landlord and therefore the forerunner of a genuine social change.[89]

All these programs constitute a concerted effort to uplift adults who for one reason or other could not or did not avail themselves of the opportunities offered by the day public schools when they were young. Education which limits itself to the formal day programs is out of step with the rapid transformation taking place in our society. Mechanization, automation, cybernetics and rapid social changes force everyone to keep studying and learning. There is a high correlation between education and employment and earnings, between education and health, between level of education and number of children born in a family, between education and socioeconomic status. People are aware of these facts in Puerto Rico. There are evening schools for adults from the first level of literacy to the university. The thrust of education is evident day and night, in academic as well as in vocational courses. These programs for adults are opening new opportunities, new avenues of development to individuals who otherwise would have stayed in the lower ranks of education, culture, employment and earnings.

SCHOOLS AND HEALTH

There is probably no more dramatic change in Puerto Rico than the improvement in health and life expectancy. The schools have been instrumental in this positive gain in our way of life. Let us look at this aspect in the perspective of time. This is the way James Russell Bourne and Dorothy Dulles Bourne saw the situation around the thirties:

> Sanitation in small towns and rural areas was almost nonexistent, water supplies were polluted, malaria, tuberculosis, gastritis-enteritis and other diseases were endemic. The resulting mortality rate was very high and life-expectancy very low. Due to lack of roads, sick people were carried down the mountain paths on hammocks to the nearest highway, then to be taken to the municipal hospital, itself not very sanitary. Often there was no doctor available when the patient arrived, or for some time afterward. There were a few latrines in the rural areas, with the result of a very high incidence of hookworm.
>
> Overpopulation was a strong contributing cause to the health situation. Parents simply could not feed or care properly for their large numbers of children.
>
> Malnutrition was an important factor in the death rate, not so much from starvation, as by lowering resistance to diseases. Poor and unsanitary housing

> was also instrumental in fostering disease and disability. Many of these troubles were due to ignorance. Even though the government spent an unusually high percentage of its income on education, less than half (46.5 percent) of the children had an opportunity to go to school, and for the majority this meant only third grade education. Neither could they learn the essentials of healthy living at home, since there were no social workers or welfare services until 1930, and only inadequate ones for some years more.[90]

Some years ago, in a lecture about the schools and their contribution to the improvement of public health, I presented a picture which I summarize to contrast it with present conditions:

1. Our total population exceeded two million inhabitants (2,045,793, in 1945, to be exact). This gave us a population density of about 600 inhabitants per square mile. Our population increased at the rate of 21 persons per each 1,000 inhabitants. Such a high human concentration in an area of 3,435 square miles, with an essentially agricultural economy, brought many problems, particularly in matters of health.
2. About three-fourths of our population was undernourished, "at the edge of the clinic deficiency in various elements of the diet, specially protein, calcium, vitamins A, C, and riboflavin." Children up to 15 years of age, who constituted 40.6 percent of the total population, were included in this figure.

The disadvantages of those in poor health are stretched out through all their lives, even more so if during their childhood they have been in need of a well-balanced diet, a proper home and the advantages of preventive medicine. "Poor nourishment during childhood will be an obstacle that the majority of the children will drag on all their lives." The dietary deficiency partly explains why the average Puerto Rican was dangerously under the standards of weight and height.

Analyzing the surveys made in Puerto Rico by Salivia (1916), Bary (1923), Payne, Berríos and Martínez Rivera (1930), Mitchel (1932), Eliot (1933), Morales Otero (1939), and Seijo (1942); Miss Ana Teresa Blanco in her study on nutrition in Puerto Rico (1946), reached the following conclusions:

> All the studies show consistently the same thing: Puerto Ricans are considerably shorter in height and of less weight than the North American groups with which they were compared. Within the groups in the Island, those persons who enjoy better socio-economic conditions are better-developed physically and the degree of advantage in the development is proportionate to the degree of socio-economic advantage of one group over another.

In another study we made in 1939–40 in the district of Mayagüez we found that out of 8,445 students in the public schools, 2,643 had some defect in their teeth. This number was 31 percent of the population under study. Out of that same number of students 3,653, that is, 43 percent, were underweight.

As these studies reveal, economic want seems to condemn poor children to have deficient physical structures that function inadequately.

3. Around 90 percent of the rural population—the great majority of our population—suffered from uncinariasis.

In 1961 the rate of deaths due to this cause was 0.2; that is, four people died.

4. Of every 100,000 Puerto Ricans, 225.9 died annually (1946) from diarrhea and enteritis—this was the greatest number of deaths due to a single disease in that year.

The rate of mortality of this disease in 1962 had dropped to 33.9 persons per every 100,000 inhabitants. This disease stopped being the cause of the greatest number of deaths, and since 1953 heart diseases have been the main causes of deaths. In 1962 heart diseases accounted for 3,083 deaths, which represented 18.6 percent of the total number of deaths that year.

5. Out of every 100,000 inhabitants, 207.6, that is, 25.3 percent of the total number of deaths, were due to tuberculosis, the second disease by number of deaths caused (1946).

In 1962 this disease caused 582 deaths, or the equivalent of a rate of 23.7 per 100,000 inhabitants.

6. Of every 100,000 inhabitants, 32.3 died from malaria (1946).

In Puerto Rico no deaths from malaria have been registered since 1955. Puerto Rico is now free from this disease.

7. In 1947 a total of 13,898 cases of syphilis and other venereal diseases were reported to the health department. Of these, 206 died.

In 1962, only 1,188 new cases of syphilis and 3,029 of gonorrhea were reported to the health department. Although these diseases have ceased to constitute the serious health problems they were in past years, there has been a small increase in their incidence in the last few years.

8. Bilharziosis had in 1947 a slight increase. Mortality per 100,000 inhabitants for this disease was 3.1.

In 1961 there were 678 cases of bilharziosis; mortality rate of this disease was 28.8 per 100,000 inhabitants (1961).

9. Other diseases like cancer, nephritis, pneumonia and heart diseases are responsible for a great number of deaths (1961).

A total of 3,614 new cases of cancer were reported in 1961. In 1962 the mortality rate of cancer was 82.3 and that for heart diseases was 125.6.

10. In 1946, 27,570 deaths occurred (all causes). This represents a rate of 13.2 deaths per every thousand inhabitants. In 1963 there were 17,213 deaths (all causes). The annual rate was 6.8 deaths per every thousand inhabitants.

We find in the statistics of the Second World War kept by the Puerto Rico Selective Service a positive reaffirmation of the fact that Puerto

Ricans have inferior health. Even if we ignore factors which are purely human, as are some of those that enter into the selection of candidates for the Army, the situation is no less than alarming even to the most optimistic persons. Out of 200,000 men called to the military service, 78 percent—a total of 163,141—were rejected because of various physical disabilities. Compare this with rejection in the United States, which was from 15 to 40 percent, depending on the area.

In Puerto Rico, during the Second World War, 11,911 candidates were rejected because of nervous disorders. Judging from this figure we could say that our mental health was also threatened. Eye, ear, and throat defects were the cause for the rejection of 7,040 men; feet defects disqualified 22,238, and 10,135 were rejected because of defects in their muscular and skeletal systems. Other purely physical defects prevented 14,345 candidates from going into the service.

Information provided by the Selective Service System in September 1964, indicates that between June 1, 1958, and June 30, 1964, out of 60,852 enlisted men who were examined, a total of 35,901, that is, 59 percent were rejected because of different reasons. Of those rejected 9,863, or 16.21 percent, had as one of the causes for rejection the results of the medical examinations. As can be seen from this data, the health of the young Puerto Ricans who can enter the military service has improved considerably. Of course, it must be made clear that part of the health improvement indicated by these figures may be due to the fact that physical conditions of a group of candidates may be one thing when there is a general recruitment—as during a war—and another when the drafting is highly selective, as has happened in these last years. We must also consider that selection and rejection standards may vary, and, in fact, have varied.

In our opinion, the two most revealing indexes in regard to attainments in health level reached by the population are the general mortality rate and life expectancy. The general mortality rate is affected in turn by the infant mortality rate and by maternal mortality. Infant mortality in Puerto Rico was reduced from 138.5 deaths per every thousand children born alive in 1937 to 44.2 per thousand in 1963. This improvement implies that the number of infant deaths which represented 25.3 percent of the total of deaths registered in 1937, represented only 19.7 percent of the total registered in 1963. In the same way the deaths of mothers which were 5.5 per every thousand children born alive in 1937, were only 0.5 per each thousand children born alive in 1963. Emphasis is given to these components of the total mortality because these are the factors needed to determine the number of school-age children there will be in the future.

We have seen how the general mortality rate has decreased from 26.9 per thousand inhabitants in 1937 to 6.8 per thousand inhabitants in 1963, and that, on the other side, the birth rate decreased from 38.2 per thousand inhabitants in 1937 to only 30.5 per thousand in 1963. In this way the natural growth of the population of Puerto Rico increases from 17.3 inhabitants per thousand in the population in 1937 to 23.7 in 1963. This increase in the population growth and in life expectancy, are the logical result of the improvement in the population health, among other factors.

The fundamental impact that health improvement of the inhabitants of Puerto Rico has had on the educational program of the country has been the greater number of children and young persons of school-age for which the educational system has had to provide study opportunities in its educational levels, from elementary to university level. On the basis of the 1937 mortality rate 1,209,000 persons would have died from 1937 to 1963. Only 643,000 died while 566,000 were spared by health improvement and other causes. On the basis of the 1937 infant mortality rate 295,000 children less than a year old would have died from 1937 to 1963. Only 161,000 died and 134,000 children were spared. Health improvement, among other factors, is reflected in the educational system in the population increase implied by that improvement.

EDUCATION, AND INDUSTRIAL AND COMMERCIAL DEVELOPMENT IN PUERTO RICO

It has been said elsewhere in this paper that education has been the driving force of the peaceful revolution which has taken place in the Commonwealth. Education influenced development in industries and commercial enterprises, and now both these areas of activities at the remarkable rate of increase they have shown are exerting and will continue to exert significant influence on the educational system, our cultural patterns, on our consumption and work habits, on our family organization, and on many other areas of our social and economic organization. Industries and commerce increase our contacts with the North American business world, with American points of views, ideals and preferences.

Cultural patterns which are directly introduced by economic power, commercial relations, and the power of business, develop faster than when these moving forces are not present.

Let us have a look at these influences in operation by observing these facts: In 1954, agriculture, generating a total income of $169 million, was the key factor in Puerto Rico's economy, followed by commercial income and manufacture which generated $155 million each. By 1964 manufactural enterprises accounted for $486 million income; commerce generated $375 million, and agriculture occupied third position with an income of $205 million. These figures represent an increase of 213 percent for manufacture, 142 percent for commerce, and 12 percent for agriculture.[91]

There is still another more important transformation: Puerto Rico, during the fiscal year 1963–64, had bought $1,119,218,000 worth of U.S. products. This turned Puerto Rico into the second buyer of U.S. products in the Western Hemisphere. Only Canada buys more than Puerto Rico in this hemisphere. The fourth buyer from the United States is Venezuela who bought only half of what Puerto Rico bought. Each Puerto Rican, it is reported, buys an average of $405 in American products as compared to $236 spent by Canadians and $70.90 by Venezuelans. In the world market only Japan, Great Britain, and West Germany buy more North American products than Puerto Rico. Nine European countries—Sweden, Denmark, Norway, Spain, Austria, Portugal, Ireland, Finland, and Iceland—all together buy less from the United States market than Puerto Rico. The 106,079,000 inhabitants of Brazil, Argentina, Venezuela, and Uruguay buy less from the United States than the 2,445,000 inhabitants of Puerto Rico.[92]

The number of employments, contacts, communications, social relations, family involvements which all this economic movement generates exert inevitable cultural pressure on any community so influenced. The schools not only have to train people for these developments, but guide and orient the course of cultural contacts and consequences. The growing middle class brings with it new values, new ideals, growing expectations. People in this class try to obtain by economic power what they lack in social prestige and relations.

Mr. and Mrs. Bourne, in the study previously mentioned, recognize these developments:

> * * * changes are taking place through growth rather than revolution. To a limited extent the change began in 1898, when Puerto Rico was forced to make some adaptations to the capitalistic systems of the United States. New directions, new functions, and the growth of resources have provided the forms for the prestige and power structures at the same time changing the proportions of the upper and lower classes—both in member and in influence—through the enormous growth of the middle class.[93]

PRIVATE SCHOOLS

Private schools (accredited and nonaccredited) constitute an asset to the island's educational system. This kind of school has been functioning since the Spanish rule. The origin of the primary and secondary schools developed during the Spanish regime is traceable to the efforts of the monasteries, the churches and the people.[94] After the public educational system was established with the advent of a new colonial administration, the private schools continued offering educational opportunities. There are private schools of different denominations as well as secular schools. Of the 155 private schools existing in 1960 there were 132 accredited by the Department of Education. Of these, 71 were Catholic, 34 nonsectarian, 2 Adventist, 6 Baptist, 3 Disciples of Christ, 3 Episcopalian, 2 United Evangelist, 9 Methodist, and 1 Presbyterian. Among these schools there are elementary, secondary and also post-secondary commercial schools.

Forty percent of these schools were accredited during the last decade. This shows the growth of private schools during the decade, a growth caused by factors such as population mobility, rise in the family economic level, improved transportation facilities, a longer schoolday, and the status symbol the private schools are acquiring within the community. During the past few years a continuous increase in enrollment has been noted at the junior and senior school level.

During the last 5 school years the distribution of the total enrollment of the school system of Puerto Rico, between public and private schools, was as follows:

School year	School level and type of school						Total enrollment	
	Elementary		Junior high school		Senior high school			
	Public	Private	Public	Private	Public	Private	Public	Private
1960–61	391,189	33,354	125,298	12,033	60,558	8,647	577,045	54,034
1961–62	393,495	34,132	128,642	12,857	66,353	8,775	588,490	55,764
1962–63	394,742	37,453	128,762	13,636	73,300	9,557	596,804	60,646
1963–64	398,865	38,168	128,375	14,251	79,368	9,923	606,608	62,342
1964–65	402,533	36,695	127,306	14,440	83,035	10,632	612,874	61,767

Private school enrollment which was 8.6 percent of the total public and private schools enrollment in 1960–61 increased to 9.2 percent in 1964–65.

There is no doubt that the private school will continue sharing the educational task with the public school. In computing enrollment projections for the future it is assumed that there will be a gradual increase in the total enrollment of the private schools. The projections of enrollment show that there will be about 10.5 percent of the pupils of school age in Puerto Rico enrolled in the private schools by 1975.

The Department of Education is in charge of accrediting these schools if they meet the requirements of organization, buildings, equipment, preparation of teachers, and materials.

Private schools are different from each other and in some aspects are different from the public schools. The most notable differences are in the selection of pupils, buildings, and materials, and in cooperation received from the parents. The following significant factors can be pointed out about private schools:

1. The higher socioeconomic level of their students which permits them to have the benefit of a variety of cultural and social experiences.
2. Better physical environment and more adequate school equipment which facilitate learning under desirable conditions of hygiene, security, and comfort.
3. Didactic materials in sufficient quantity, and availability of equipment necessary for efficient study conditions.
4. Parents' cooperation in the activities that are developed and in the homework assigned to students.
5. Disciplinary procedures and methods of instruction which make possible the full use of the school time for academic activities. Usually the extracurricular activities do not interfere with regular schoolwork.
6. Selective criteria for choosing their students.
7. Predominance of single enrollment organization or a special type of interlocking organization quite similar to the single enrollment.
8. Emphasis on academic achievement.

THE TEACHING PROFESSION AND THE COMMUNITY

If we were to apply the critique that a person's worth is to be measured by the quantity of his possessions or by the salary he receives, the teachers of Puerto Rico would inevitably appear at one of the lowest levels on the scale of professional persons. According to a recent study done by the superior educational council, the entrance salary of the teacher in Puerto Rico with a bachelor's degree is $250 per month which is much lower than that of 19 different classes of professional jobs in the competitive service of the Commonwealth government with the entrance requirement of a bachelor's degree or its equivalent. During the last 10 or 15 years there have been increases in the teachers' salaries but these increases have not been in accordance with those in the other government and industrial jobs nor with the increase in the personal income of Puerto Rico. During the years 1950–64 the personal income in Puerto Rico increased from $653.4 million to $2,100.8 million. This change represents an increase of 221.5 percent from 1950 to 1964; or an average increase of about 16 percent per year during these 14 years. During this same period the average annual salary of the public school teachers of Puerto Rico increased from $1,534 to $3,280. That is, this salary had an increase of 113.8

percent from 1950 to 1964. The average annual increase during these 14 years was only 8.1 percent. In other words, during the period 1950–64 the personal income increased three times while the average annual salary of the teachers of public schools increased only twice. If a teacher's salary had kept the relative position with the per capita personal income in Puerto Rico which it enjoyed in 1950 the average salary of a teacher would have been $4,297 instead of the $3,280 which a teacher received in 1964. Further analysis of increases in teachers' salaries in comparison with increases in the salaries of persons who work in industries show that while the latter had an average increase per year of about 10 percent from 1952 to 1963 the teachers had an increase of only 5.2 percent. Other analysis of increases from 1960 to 1965 of a variety of some 19 different salary scales for government employees, show consistently that during this period teachers have obtained the lowest percentages of increases in their salaries.

The prestige of public school teachers due to varying factors has been suffering. Teachers themselves, according to the "Study of Education System of Puerto Rico" conducted in 1960, express misgivings in this respect. They themselves do not have high regard for the schools in which they work in contrast to the opinion they manifest when public and private schools are compared. Teachers are the object of praise in speeches, ceremonies, and public functions, but not enough has been done to turn into reality the high verbal expression with which their work is described.

Regardless of these facts teachers keep being leaders in their communities, but they no longer stay for enough time in the towns or rural centers to continue participating in community life as they used to do. On the other hand, too many tasks that belonged to the family and the church are increasingly being left to the teachers and to schools to perform. Industrialization and urbanization are not going to ease this trend.

Appendix A of this report describes objectively the main aspects of the economic situation of the teaching profession in Puerto Rico.

Almost all the teachers of Puerto Rico are affiliated with the Puerto Rico Teachers Association, a most important organization which is supposed to uplift their morality and increase the appreciation and respect of society. The association was founded in 1911 when the following conditions prevailed:

> You could be a teacher if you passed the eighth grade and took a free examination offered by the Department of Education. Appointments were made on the basis of political relations; salaries were $30 for the rural teachers and $50 for the urban; the school year consisted of nine months; the supervisor and politicians controlled the whole situation; there were no tenure laws, retirement system or salary scales; the teaching profession served only as a stepladder for other activities.[95]

The following goals are pursued according to the bylaws approved by the association when it was founded:

a. To stimulate fraternity among teachers.

b. To adopt the necessary reforms to improve the present educational system.

c. To sponsor and execute projects which tend to improve the teachers' economic conditions such as saving and loan banks, cooperatives, etc.

d. To help the members in case of sickness, physical and professional disability, as well as that of their relatives in case of death.[96]

The association has worked for a series of measures that have improved the teaching profession. Among those are: Certification laws, tenure, salary scale, retirement system, and a 12-month school year, 10 months of which are devoted to regular classroom work, one to vacation, and another to school activities during the summer. It has established a series of services such as hospital and medical care for its members and their relatives. It has established credit cooperatives and insurance policies. It carries on such cultural activities as publications, radio programs, a scholarship plan for the members' children, and travel promoted by its bureau of tourism. It is affiliated to the National Educational Association. The bureau of tourism stimulates teachers to visit other countries for recreational and cultural purposes so that they can have a better understanding of other peoples.

Aside from the efforts to guarantee the teachers' security, the association has worked for, and has brought to the attention of the public and of government authorities, such problems of education as language policies, philosophy and objectives of education, the teaching of social and economic problems, the establishment of junior high schools, and the need to eliminate double enrollment and interlocking. The Committee on Educational Problems has dealt with various problems relative to the public schools and the teaching profession: Among others, textbooks, teaching materials, teachers' dropouts, selection of candidates, and the teaching of ethical values. Furthermore, the association has helped to stimulate the peoples' interest in the public schools of Puerto Rico. However, due to the socioeconomic conditions of teachers, the main emphasis has been on economic matters.

FINANCIAL RESOURCES DEVOTED TO THE FUNCTION OF EDUCATION: COMMONWEALTH AND FEDERAL FUNDS

Ever since the organization of the school system as a formal enterprise of the government of Puerto Rico it has claimed the largest share of our fiscal resources. In 1951–52, the last fiscal year before the advent of the Commonwealth status for Puerto Rico, the expenses in education amounted to 22.4 percent of a total budget of $149,590,950. In 1952–53, the first fiscal year under the Commonwealth status, this proportion decreased to 21.7 percent of the total budget for that year but by fiscal year 1962–63, a decade after the inauguration of the new status, $113.9 million (27.3 percent) were spent in education of a total budget of $417.4 million. For the fiscal year 1965–66 the recommended appropriation for education was $172.1 million (31.3 percent) of a total budget of $549.5 millions.

The two main educational agencies are the Department of Education and the university. The resources appropriated for each one of them is as follows:

(a) *Department of Education.*—In 1951–52, the Department of Education had an operating budget of $33.2 million of which $3.1 million (9.4 percent of this budget) came from Federal funds. This budget decreased in $32.4 million in 1952–53, and of this total amount $3.2 million, or 9.8 percent, came from Federal funds.

By 1962–63, the operating budget of the Department of Education amounted to $91.6 million of which $5.9 million, or 6.4 percent, were Federal funds. The proposed operating budget for 1965–66 amounts to $118.1 million of State funds and, in addition, the Department of Education expects to get $46.6 million from the Federal Government pursuant to the various acts recently approved by the U.S. Congress dealing with aid to education. During this year, Federal funds will amount to 28.3 percent of the total operating budget of $164.7 million. See detailed list herein included on Federal funds expected during 1965–66:

List of Federal funds to be received by the Department of Education during fiscal year 1965–66 pursuant to the provisions of the acts of Congress

Number of the act	Title under which the funds are provided	Amount of funds to be available
85-864	National Defense Education Act:	
	Title III.—Financial assistance for strengthening science, mathematics, and modern foreign language instruction	$1,304,000
	Title V-A.—Guidance counseling and testing; identification of able students	132,000
	Title X.—Improvement of statistical services of State educational agencies	36,000
89-10	Elementary and Secondary Education Act of 1965:	
	Title I.—Financial assistance to local educational agencies for the education of children of low-income families	21,550,053
	Title II.—School library resources, textbooks and other instructional materials	1,824,200
	Title III.—Supplementary education centers and services	1,000,000
	Title V.—Grants to strengthen State departments of education	150,000
597	Federal Aid to States for Library Services (as amended)	354,933
88-204	Higher Education Facilities Act of 1963	25,860
88-452	Economic Opportunity Act of 1964:	
	Title 1A.—Job Corps	1,500,000
	Title 1B.—Work training programs	900,000
	Title II-B.—Adult basic education programs	931,240
81-920	Federal Civil Defense Act of 1950 (educational related with civil defense)	105,600
82-210	Vocational Education Act of 1963	3,834,700
	Work study programs for education students	425,000
85-864	*Title III.*—Amended to include trades and industries of the vocational education program	326,381
87-415	Manpower, Development, and Training Act, Part B	1,500,000

List of Federal funds to be received by the Department of Education during fiscal year 1965–66 pursuant to the provisions of the acts of Congress—Continued

Number of the act	Title under which the funds are provided	Amount of funds to be available
87–447	The Educational Television Facilities Act of 1962 (grants for the construction of television broadcasting facilities to be used for educational purpose)	$150,000
79–396 and 87–823	National School Lunch Act	[1] 3,676,267 [2] 4,033,003
565	Vocational Rehabilitation Act	2,385,553
	(funds alloted for four special projects)	206,791
761	Social Security Act (program to determine the physical incapability in cases of social security claims)	292,994
	Total funds available	46,644,575

[1] Cash.
[2] Food supply.

The programs of the Department of Education which historically had benefited most from Federal appropriations are vocational education, vocational rehabilitation, and the school lunchrooms. Federal funds available for the programs of vocational education amounted to 25.8 percent in 1951–52, to 22.4 percent in 1952–53, and to 34 percent in 1962–63, respectively, of the total budget for this program during each of these fiscal years. It is expected that Federal funds will amount to 46.6 percent of the budget for this program during the fiscal year 1965–66. Federal funds accounted for 58.2 percent of the vocational rehabilitation budget in 1951–52, for 58.7 percent in 1952–53, and for 72.1 percent in 1962–63. In the fiscal year 1965–66 it is expected that 72.5 percent of this program will be financed by Federal funds. The school lunchroom program benefited from Federal funds in the following proportions: 1951–52, 39.6 percent; 1952–53, 35.9 percent; 1962–63, 52.6 percent, and 1965–66, 50.5 percent.

Other programs of the Department of Education which received Federal funds during the fiscal year 1964–65 and that expect to continue to receive them during the fiscal year 1965–66 are public libraries for the rural zones, teaching of science, mathematics, languages, social sciences, and English, improvement of statistical services, development and training of human resources, and educational programs related to civil defense.

The Department of Education expected to strengthen some of its programs through the utilization of Federal funds made available for educational programs under several Federal acts such as the Economic Opportunities Act of 1964 and the Elementary and Secondary Education Act of 1965. Thus far it is getting such funds in the amount of approximately $3.8 million. These funds are being used in youth programs, community programs, adult education, and preschool education (project Headstart).

(*b*) *The University of Puerto Rico.*—In 1951–52 the total operating budget of the University of Puerto Rico amounted to $8,627,876 of which $976,860, or 11.3 percent, came from Federal funds. For the fiscal year 1952–53 this budget increased to $9,447,271 and of this amount $1,026,265, or 10.9 percent, came from Federal funds. According to figures supplied by the budget office of the University of Puerto Rico, in 1963–64 the total resources available for all programs under the aegis of the university amounted to $37,215,662. Of this total, $7,543,223, or 20.3 percent, came from Federal funds. The estimated resources for the fiscal year 1965–66 amount to almost $44 million. It is expected that $9.54 million, or 21.7 percent of the total, will come from Federal funds.

Almost all of the Federal funds available to the university during the years 1951–52 and 1952–53 went to the agricultural experiment station and extension services as provided by the Hatch, Adams-Purnell, and Smith-Lever Acts. However, by fiscal year 1964–65 Federal funds available to the university were shared by practically all university programs. During the above mentioned year the agricultural experiment station was getting $1.2 million (29.5 percent of its total budget); agricultural extension services, $1.8 million (57.6 percent of its total budget); the school of medicine, $3.5 million, mostly for contracted research for Federal agencies; the school of dentistry, $155,000; the Río Piedras campus, $1.4 million; the Mayagüez campus, $185,728, and the Puerto Rico Nuclear Center, $1.4 million. Economic aid to students is also available at present under the Federal loan program and the work and study programs.

SCHOLARSHIPS

The scholarship and economic aid programs constitute one of the main features of the educational system of Puerto Rico. These programs are geared to the over-all objective of the development of human resources—the only abundant resource available. During the fiscal year 1962–63 the Department of Education devoted almost $2.8 million to scholarships and economic aid and during fiscal year 1964–65 this amount increased to $3.8 million. These funds have been used for the search and development of gifted students in public schools, for training in professions for which there is a growing demand in our society, and for development and training of our teaching personnel.

The scholarship and economic aid program of the University of Puerto Rico spent $405,500 during the school year 1952–53. During the fiscal year 1962–63 funds available for these purposes amounted to $2,580,000 and the funds budgeted for fiscal year 1965–66 amount to

$2,818,700. In addition to this program the University of Puerto Rico sponsors a program of sabbatical leaves, leaves of absence with pay or with economic aid, for the improvement of the academic preparation of its teaching and technical staff. Since 1941–42 up to 1964–65 the university had devoted a total of $6,401,510 of its resources to this program benefiting 1,836 faculty members. During 1964–65 as much as $736,439 were used in this program and 171 faculty members benefited from it.

Other government agencies such as the Commonwealth Office of Personnel and the Economic Development Administration also administer scholarship programs instituted by the Government for the purpose of supplying the trained and skilled human resources needed for the development of the economy.

These scholarship programs make it possible for able but poor students to study in the elementary and secondary schools of Puerto Rico and to pursue studies at the undergraduate and graduate levels in the colleges and universities of the island, the United States, and foreign countries. In fact, as stated in a publication of the Office of the Commonwealth of Puerto Rico in Washington, "in Puerto Rico an exceptional student unable to get an education for lack of financial means is 'an emergency.' If the Department of Education or the University of Puerto Rico have exhausted their appropriations for scholarships they can call on an emergency fund of the Government, set up to cope with disasters, for money to complete a student's education."[97] This will suffice to stress the importance given by Puerto Rico to the development of its more precious resource—its people.

UNEMPLOYMENT AND UNDEREMPLOYMENT

Unemployment and underemployment are still problems with which the people of Puerto Rico have to wrestle.

According to the data of the 1960 census, the rate of unemployment among the youngsters (14–19 years old) of Puerto Rico was 10.2 percent while that of the adults (20–44 years old) was only 6.1 percent. The number of youngsters (14–19 years old) in the labor force is expected to increase, according to the official projections, from 53,700 in 1960 to 73,100 in 1965—an increase of 36 percent in this 5-year period which represents a remarkable increase of 19,400 more youths coming to the labor market in search of jobs. These young persons depend mostly, in order to get job opportunities, on the number of years of schooling they have completed.

The perspective for the period between 1965 and 1980, according to the same projections, is not brighter, for it is expected that the younger group (14–19 years old) in the labor force will increase from

73,100 in 1965 to 90,200 in 1980. This is an increase of 17,100 youths whose hopes and opportunities of finding jobs will depend, to a greater extent as the years pass by, on the schooling they have attained.

In the year 1963, the average rate of unemployment in Puerto Rico was 12 percent. When this is analyzed according to the educational level of the unemployed, it is found that the rate of unemployment among those who have 11 years or less of schooling, fluctuated between 13 and 15 percent. The rate of unemployment among those with a high school diploma was only 10 percent. Among those who had completed 13 or more years of education, unemployment was only 3 percent.

The same picture is evident in 1964. The average unemployment rate for Puerto Rico was 10.6 percent. For those persons who had completed 11 years of schooling or less the average rate of unemployment fluctuated between 12 and 15 percent. It was 8 percent for those with high school and only 2 percent for those who had completed 13 years of more of schooling.

It is clear, from the above data, that education is a determining factor not only in employment figures but on salary rates. More years of schooling for the youngsters mean a larger and more expensive task for the educational system.

The mere fact that 40,000 children of deceased, retired, or disabled workers in the nation would receive social security benefit up to the age 22 instead of 18 tends to show the need for longer years of schooling. Puerto Rico is also affected by this change. Vocational education programs will have to expand and diversify their offerings to take care of a large and significant share of these educational needs. It is unavoidable that technical, terminal, and short-term careers, be offered in special institutions developed for these purposes, or in regional colleges or university campuses.

THE UNIVERSITY OF PUERTO RICO

Organization.—As part of the study of the educational system of Puerto Rico, a team of North American educators was asked to study the institutions of higher learning on the island. The group was picked and presided over by Dr. Frank H. Bowles, at the time President of the College Entrance Examination Board and now with the Ford Foundation. His report summarizes some of the main aspects of the governance of the University of Puerto Rico:

> The legal status of the University is determined by the University Law Number 135, approved May 7, 1942, and as amended.
>
> The law establishes a 6 man Superior Educational Council, names the Commissioner (now the Secretary) of Education as its president, states that the governance of the University will reside within that Council, charges the council

> with the continuing study of the educational situation in Puerto Rico and with formulating the basis for coordination between the system of public instruction and the University, provides for the appointment of the Rector of the University by the Council, to hold office at the pleasure of the Council and provides for one stated annual meeting. It further provides for the delegation to the Rector of the powers and authority required for the operation of the University and specifically reserves to the Council only two important powers of control—the approval of the global sum called for by the University budget and the approval of nominations made by the Rector for the senior administrative posts within the University. It also provides for a Permanent Secretary and staff, who are in general terms charged with studies of educational needs as well as with the administration of the arrangements, meetings and records of the Council.[89]

The University of Puerto Rico is a corporation under the superior educational council, so "the Superior Educational Council is by law the University. If properly exercised, it has the powers pertinent to planning, coordinating, policy making which are usually exercised by governing boards."

> The Superior Educational Council meets in regular sessions between April and June of each year. It may hold extraordinary meetings at other times when so directed by the president or required by four of its members.
>
> The Council outlines the general policies of the University, keeps itself informed on the functioning of the institution [through the Chancellor and the Permanent Secretary], and holds annual public hearings to consider University activities and problems.
>
> The Chancellor, who is appointed for an indefinite term by the Superior Educational Council, is executive director of the University. Subject to the approval of the Council, he appoints the Vice-Chancellor for the Mayagüez Campus, all University Deans, Directors of University special research facilities and the Agricultural Extension Service, the Treasurer, and the Registrar. He also has full authority of supervision and orientation over all University officials and employees.
>
> The University Boards at Río Piedras and Mayagüez act as advisory bodies to the Chancellor and collaborate with him in carrying out the University program. Each board consists of the Deans, a Faculty Representative elected for a two-year period by the teaching staff, and the Chancellor, who is President. The Vice-Chancellor presides over the University Board at Mayagüez when the Chancellor is not present. [The University Boards draft the University budget which shall be submitted to the Superior Educational Council for approval.]
>
> The Academic Senate of Mayagüez is a body consisting of the members of the University Board, the Director of Graduate Studies, the Director of the Nucelar Center, the Librarian, the Director of the Agricultural Experiment Station and the Director of the Agricultural Extension Service, and reprsentatives from the faculties which are elected for two years. [The Academic Senate at Río Piedras consists of the members of the University Board, two members elected by each Faculty and five members elected by the General Faculty, for a term of three years.] The Academic Senates have the authority to formulate regulations concerning all academic matters.[90]

The 1942 university law contemplates some advisory faculty participation in university matters when it states:

> The professors, associate professors, assistant professors and instructors of each college or faculty shall constitute a body to work for the improvement of the academic standards and the cultural progress of the University. The faculty, meeting under the chairmanship of the corresponding dean, can (a) recommend to the University Board measures for improving the programs of studies and the academic and administrative standards; (b) adopt resolutions to intensify the work of the college in question and make more effective the carrying out (of the purposes) for which the University has been created; (c) propose to the University Board programs of academic work to be carried out within the college and cultural-extension projects; (d) take action in those matters within its incumbency, submitted to it by the dean; (e) adopt, with the approval of the University Board, the rules necessary for the discharge of the functions fixed by this Act, and (f) express its point of view to the chancellor, the University Board, and the Superior Educational Council on every matter relating to the good progress of the institution.[100]

The lack of faculty participation has been one of the main bones of contention for years, almost since the law was approved. The Commission on Institutions of Higher Education, Middle States Association of Colleges and Secondary Schools, address itself to this point in "A Report on the University of Puerto Rico," of November 1959:

> What is needed is a formally organized faculty body with corporate responsibilities; the implementation of such a proposal is imminent. Such a faculty organization, necessary to introduce greater democracy in carrying out the affairs of the University, is long overdue.

In 1957, previous to this report, a faculty committee had also recommended legislation and amendments to the bylaws of the institution among which was the creation of an academic senate to guarantee the faculty participation in "the formulation of norms, orientation of academic programs, and guaranteeing faculty rights in the governance of the university."

The academic senates were created administratively; they were not the result of an amendment to the law. The Secretary of Justice was consulted on their creation. But the senate's decisions have to be "ratified by the corresponding authorities" which are none other than the university board and the superior council on education. If it is taken into consideration that the entire university board is part of the academic senate, technically and theoretically, any decision of the senate in which the members of the board are defeated, can be overruled afterwards if the decision goes to the board acting as one of the "corresponding authorities."

Thus, faculty participation is exceedingly limited.

Before 1948 the students had a representative on the university board. He and the faculty representative were the only two members of the board who did not owe their appointments to the chancellor. The student representative was eliminated from the university board immediately after the strike of 1948. Since then the students have had practically no say in university matters, not even those affecting them directly.

All graduate studies at the university are approved by the superior educational council upon recommendation of the chancellor and the corresponding university boards.

The graduate council is the body governing the graduate studies at the College of Agriculture and Mechanic Arts of the University of Puerto Rico. This organization was created by administrative action of the vice chancellor and the university board when graduate studies were initiated in this campus.

Colleges, Schools, and Faculties in Río Piedras

The principal and the oldest campus is at Río Piedras in the metropolitan area of San Juan. It comprises approximately 288 acres with the major part of its buildings grouped together near the eastern side of Ponce de León Avenue, the main thoroughfare connecting San Juan and Río Piedras.

The Faculty[101] of General Studies offers a program which is required of all first-year students at the University, except those taking the 2-year course in Secretarial Science offered by the College of Business Administration.

The General Studies program introduces the student to the fundamental disciplines of knowledge, helps him acquire and develop an understanding of the nature of man and the natural and social world in which he lives, and gives him the opportunity to reaffirm or modify his chosen profession. The program includes four basic introductory subjects: Physical Sciences, Biological Sciences, Social Sciences, and Humanities; and, in addition, basic courses in English and Spanish, and a course in Mathematics, which is taught in the Faculty of Natural Sciences. The Faculty also offers a program leading to a Bachelor of Arts degree.

The Faculty of Humanities offers a number of programs leading to the Bachelor of Arts degree: a general program and programs with majors in Spanish Studies, English, French, History, Philosophy, Art and Theater. [The Faculty also offers graduate courses in Spanish Studies, Philosophy, History and English.] The activities of the Faculty include the Archeological Research Center, the Spanish Studies Seminar, the Luis Muñoz Rivera Museum of Anthropology, History, and Art, the University Theater, the University Chorus and the University Orchestra.

The Faculty of Natural Sciences offers courses leading to the Bachelor of Science degree, by following a General Science Program or programs with majors in Biology, Chemistry, Mathematics and Physics. [It offers graduate programs in Chemistry, Biology and Mathematics.] It also offers a General Program leading to a Bachelor of Arts degree and special courses for premedical and predental students. The Institute of Tropical Meteorology, the Institute of Nutrition, the Radio Research Laboratory, the Cosmic Ray Laboratory, the Astronomical Observatory, the Radioisotopes Techniques Training Center, the Biology Museum, and the Division of Studies Related to Medicine are also part of the Faculty of Natural Sciences.

The Faculty of Social Sciences offers a Bachelor of Arts degree, by following a General Program or programs with majors in Economics, Government, Psychology, and Sociology and Anthropology. It also offers graduate programs in Public Administration, Social Work, [Planning and Economics]. The Social Science Research Center, the Institute of Labor Relations, and the Institute of

Cooperativism are part of the Faculty of Social Sciences. A Graduate Professional Diploma in Rehabilitation Counseling is offered by the School of Social Work.

The College of Business Administration offers courses leading to the Bachelor's degree in Business Administration by following a General Program or programs with majors in Accounting, Economics, Finance, and Management. It also offers a four-year program leading to the degree of Bachelor of Secretarial Science and a two-year course leading to a Diploma in Secretarial Studies. The Evening Division of the College of Business Administration offers the same programs; but the four-year programs take eight years to complete and the two year programs, five.

The College of Education provides academic and professional training for elementary and secondary school teachers.

Programs lead to the Bachelor of Arts Degree in Elementary and Secondary Education with majors in several fields of the liberal arts and in Business Education, Industrial Education, Home Economics, and Physical Education. [There are also graduate programs in Education and programs leading to a Bachelor of Science degree in Education, with majors in Home Economics or Nutrition.] The College also awards a General Normal Diploma and professional diplomas in Industrial Education and the Teaching of English, as well as professional diplomas in Educational Administration and Supervision and in Guidance. The College of Education also includes a Center of Audio-Visual Education, the University Elementary School, the University High School, and the Office of Guidance Services.

The School of Law offers the degree of Bachelor of Laws. The three year program is open to college graduates who fulfill the entrance requirements. The evening division offers the same program to be completed in a minimum of four years.

The College of Pharmacy offers a five-year program leading to the degree of Bachelor of Science in Pharmacy. The Pharmacy Museum, and the Pharmaceutical Research Laboratory are part of the College of Pharmacy.

Schools in San Juan

The School of Medicine-School of Tropical Medicine offers courses leading to the degrees of Doctor of Medicine, Doctor in Philosophy, Master in Sanitary Science, Master in Public Health Education, Master in Public Health, Master of Science, [Master of Medical Zoology and Histopathology, Master and Doctorate in Pharmacology and Toxicology], Bachelor of Science in Nursing, Bachelor of Science in Occupational Therapy, Bachelor of Science in Physical Therapy and Certificates in Nursing, with concentrations in Public Health Nursing, Clinical Nursing, Psychiatric Nursing, and Medical Technology. It also provides postgraduate courses and other facilities designed to keep persons in the medical professions informed of new discoveries and techniques in their fields.

The School of Medicine-School of Tropical Medicine has been able to establish a broad program of scholarships reserved for residents of Puerto Rico, which supports two-thirds of its students. After graduation, the holders of such scholarships are obligated to work for the Government of the Commonwealth for as many years as they benefited from the scholarship.

The School of Dentistry offers the degree of [Master of Oral Surgery], Doctor of Dental Medicine. Like the School of Medicine-School of Tropical Medicine, it also has a scholarship program benefiting a large number of its students.

Colleges and Faculties in Mayagüez

The College of Agriculture and Mechanic Arts comprises three divisions of studies: the College of Agriculture, the College of Arts and Sciences, and the College of Engineering.

The College of Agriculture offers courses leading to a Bachelor of Science degree by following a special program, or a general program, with majors in Agricultural Business, Agricultural Education, Agricultural Extension, Animal Science, and Mechanized Agriculture; and Master of Science degree in Agriculture.

The College of Arts and Sciences offers courses leading to the degree of Bachelor of Arts with majors in English, Humanities, Social Sciences, and Spanish; Bachelor of Science with majors in Biology, Chemistry, Geology, Mathematics, Physics and Pre-Medical Sciences; and Master of Science degree with majors in Biology, Chemistry, Mathematics, Physics and Radiological Physics.

The College of Engineering offers a five-year program leading to the degree of Bachelor of Science with majors in Chemical Engineering, Civil Engineering, Electrical Engineering, Industrial Engineering, and Mechanical Engineering; and Master of Science degree in Nuclear Engineering. In addition the College of Engineering through the Technical Institute Program offers Associate in Science Degree in the fields of Drafting and Building Construction, Electrical Power and Electronics, Mechanical Design and Metalworking, and Surveying and Highway Construction.

Agricultural Experiment Station

The main objective of the Agricultural Experiment Station is to develop and carry out a comprehensive program of research in the production, utilization and marketing phases of agriculture so as to provide basic knowledge for the advancement and development of the agricultural industry; and to devise new means of efficiently increasing the total volume of agricultural production in Puerto Rico. In addition to this basic function, the Station is authorized to carry on research for the improvement of the rum manufacturing industry and for the industrialization of the total agricultural production. The Station is also authorized to produce seed at low cost. These Seeds Farms are integrated with the Regional Research Substations.

The Station was originally established in 1910 by the Sugar Producers Association of Puerto Rico, which ceded the Station lands and buildings to the Government of Puerto Rico three years later. In 1933 the Station was transferred to the University by Legislative action, thus making it eligible to receive Federal grant-in-aid funds.

Sixty-eight percent of the Station's annual budget of approximately 3.5 million dollars is derived from funds allocated by the Legislature of Puerto Rico; 27 percent is derived from Federal appropriations under the Hatch Act and 5 percent, from donations and contributions. Besides the Main Station at Río Piedras there are six substations located at Isabela, Lajas, Corozal, Adjuntas, Gurabo and Ponce. The Food Technology Laboratory and the Rum Pilot Plant, together with the Main Agricultural Library and the Computer and Statistical Center are located at the Main Station at Río Piedras.

Agriculural Extension Service

The Agricultural Extension Service works in cooperation with the United States Department of Agriculture. Officially a divsion of the Mayagüez Campus of the University of Puerto Rico, it belongs to the educational section of the

Association of Land-Grant Colleges and Universities. Its operation funds come from both Commonwealth and Federal Government sources.

The Agricultural Extension Service was initiated in Puerto Rico in 1934, under a cooperative agreement between the United States Department of Agriculture and the University of Puerto Rico. Agricultural development work had been carried on by several government agencies before 1934, and the burdens carried by them were assumed by the present Extension Service. The Organization is headed by a Director selected by the University and satisfactory to the United States Department of Agriculture.

For the sake of the Extension work the Island is divided into five regions, which are then subdivided into 17 districts and 67 areas. In each area there is a planning committee made up of local people who discuss the problems and possible solutions which are the core of a long range program to be developed. This planning committee also helps the agents to develop an annual plan of work toward the solution of the problems. Extension work is basically an educational program that encompasses information, orientation and technical assistance and has as its ultimate objective the improvement of the standard of living and general welfare of the rural population, including adults and youth. Agents devote 25 to 40 percent of their time to youth development work through 4-H Clubs of boys and girls.[102]

The superior educational council is by law the accrediting agency of all institutions of higher learning in Puerto Rico:

> [There] is hereby established an accrediting system for colleges and other private educational institutions which offer advanced courses of study in the sciences, the arts, philosophy, professional and technical subjects and any others of superior level to those of the high school. The accrediting system so established shall apply to all colleges or institutions of higher learning heretofore or hereafter established in Puerto Rico.[103]

The law states further:

> The University of Puerto Rico shall be the official agency in charge of fixing the standards to be met, the values of capacity and efficiency to be possessed, and the requisites to be complied with by any of the aforesaid centers of higher learning, in order to obtain recognition and, as a consequence, be invested with public authority in keeping with the exercise of their cultural and educational function. The formulation of said standards in values and requisites, as well as their accessory regulation, shall lie with such members of the faculty and the administration of the University as may be designated therefor by the Chancellor of the University, or with members of other educational centers or agencies also designated by the Chancellor of the University, and the final approval thereof shall lie with the Superior Educational Council.[104]

Dr. Frank H. Bowles has these further comments relative to the university law:

> Without going into the colonial origins of the law which were responsible for some of its unusual features, it may be noted that it produces, by the status it gives the Secretary of Education, a situation in which an appointive officer of the government and a member of the governor's cabinet sits ex officio as presiding officer of the University's governing board and on occasion casts the deciding vote with respect to University policy. But the situation is even more

> complex. The same officer as Secretary of Education is responsible for the system of public instruction which prepares the bulk of the University's students. This system is also the largest single employer of University graduates (as teachers) and by setting the terms of employment, has a large measure of control over the curriculum of the largest school in the University (Pedagogía). As Secretary of Education responsible for the system of public instruction he has a public responsibility which is comparable to the public responsibility of the Rector of the University for the system of public higher education. Yet the Rector of the University reports to the Superior Educational Council under the Presidency of the Secretary of Education, while the Secretary of Education does not report to any governing board. It is true that the Superior Educational Council is charged by law with the coordination of public instruction and higher education, but its functions are undefined, and the law makes no provision for enforcement.
>
> In operation this law has produced a small Board of Trustees composed of distinguished and well qualified individuals who meet infrequently to consider reports from the Rector and to discharge its legal responsibilities with respect to the budget and nominations for major posts. The Council through its permanent staff undertakes studies of Puerto Rican education, but has not planned or directed planning studies or projections of University development. It works ordinarily as a committee of the whole and has no regularly functioning permanent committees dealing with University policies, plans or operations.
>
> In the light of these comments the Council must be viewed as accepting a limited role in the governance and control of the University. Part of this is due to the fact that its President has professional duties with the system of Public Instruction which are his primary and asborbing duties * * * part of it is due to the fact that the only real powers of control which the Council has are so drastic (dismissal of the Rector, rejection of the budget, disapproval of nominations for administrators) that with its limited membership and infrequent meetings it is reluctant to employ them, and part of it is due to the fact that the Council is not large enough to maintain functioning sub-committees which keep them abreast of University plans and problems.[105]

In the section of this report that deals with population there is a summary of the enrollment problems faced by the university. There is also a summary of the official projection figures for university population which are predicted up to 1980 and other pertinent analyses intimately related to the population explosion and the consequently increased demand for college and university education.

In his 1962 report to the superior educational council, the chancellor describes the university situation in this manner:

> The following propositions summarize what in my judgment are the basic factors in the University situation. First, it is a center of studies in constant growth. Second, our job is to facilitate and to intensify this growth and to see that it takes place at the highest possible level. Third, we lack the necessary resources to comply fully with the above task. The achievements, innovations, successes, failures, hopes and difficulties at the University are the results of the interaction of these three propositions.[106]

In the same report the chancellor gives a quantitative picture of the growth of the university and the future perspective in this respect:

> From the date of its establishment in 1903 the University of Puerto Rico has grown at an accelerated rate. Sometimes the increase in enrollment, in programs, in faculty, has seemed overwhelming. During the past thirty years the enrollment has doubled every ten years. In 1933–34 enrollment reached 1,077; in 1943–44 it went up to 6,083; in 1953–54 up to 12,151; in 1963–64 there were 22,959 students. The same doubling every ten years appears when the size of graduating classes is noted. During the 1940–49 decade the number of graduates totalled 10,304. In 1950–59 the total was 21,355. The number of graduates during the five-year period from 1960 to 1964 (16,881) suggests that 1960–69 will produce more than 40,000, since the number of graduates in the second half of the decade may be expected considerably to exceed the number in the first half. As the number of graduates increases every year, it is to be predicted that the total for the next five years will surpass the 23,000 mark. Fortunately, as soon as our graduates finish their studies (and in the past, even before doing so) they are welcomed into the leadership cadres of the country.[107]

On the basis of this analysis the chancellor poses and answers the following question:

WHY INCREASE HIGHER EDUCATION ENROLLMENTS?

> It should be noted that unless there should be a catastrophe in the life of Puerto Rico there is no possibility of checking the rate of increase in the number seeking higher education. On the contrary, everything seems to indicate that this rate will increase. This is evident if we examine the data which show the increase in the number of high school graduates, of applications for admission to the University and of applications for transfers to the University from other institutions. Furthermore, the following factors will increase the pressure in favor of the broadest educational opportunities:
>
> 1. The increase in the urban population in relation to the rural population will result in longer retention in school.
> 2. The increase in family incomes and the continuing upward spiral of the economy will themselves require higher educational levels.
> 3. The development of regional colleges will make possible the enrollment of students who could not otherwise afford this opportunity.
> 4. University enrollments in four-year programs will increase in contrast with two-year programs as has already occurred in the College of Education and in the College of Business Administration. This is stimulated by the greater general prosperity as well as by the demand for better preparation.
> 5. The growth of high school programs will bring with it an increase in university enrollment.
> 6. The demand for university college preparation as a qualification for supervisory jobs will produce greater interest in the completion of university studies.
> 7. The growing use of mechanization and technology in the process of production and distribution will accentuate the demand for university-trained personnel. Furthermore it will increase the number of fields of employment requiring professional workers or workers with special training.
>
> The argument in favor of strengthening universities rests on the belief that there is a direct correlation between a higher level of preparation and the advancement of the best interests both of the individual and of the society. Our request for solid public support of a program of expansion and strengthening of this University in the coming years is based on the validity of this correlation.

> **The experience of the past twenty years has established as axiomatic the principle that superior knowledge is the most powerful and effective force for social transformation in the modern world. Thus its acquisition, diffusion, and expansion constitute a primary objective and a basic investment in contemporary society.**[108]

Other important aspects of university development.—The university has 1,932 members of the faculty of which 536 have doctors degrees (27.7 percent), 970 have finished their masters degrees (50.5 percent), 330 have a B.A. degree (17.3 percent), and 96 have degrees conferred by European or Latin American universities (4.5 percent). These data acquire more significance when it is added that in 1941–42 the total number of teachers—inclusive of the School of Tropical Medicine—was only 352 of which 68 or 18 percent had a doctorate, 150 or 42.6 percent had a masters degree, 96 or 27.3 percent had a B.A., and 38 (10.8 percent) were not even classified in any of the above categories.[109] [110]

From 1939–40 to 1962–63 the university has conferred a total of 44,880 degrees, certificates, and diplomas. The Río Piedras campus has conferred 38,117 of these, 4,893 have been conferred by Mayagüez campus and 1,870 by the medical schools.[111]

The functional budget of the university has gone up from $1,476,129 in 1942–43 to $37,070,471 for the academic year 1965–66. The agricultural experiment station had a budget of $273,694 in 1942–43 and $4,058,627 for 1965–66; and agricultural extension service had $386,411 for 1942–43 and $3,454,258 for 1965–66. It is to be noted that these amounts do not include amounts assigned for physical plant facilities or operating funds for auxiliary agencies.

During the last 10 years the university has doubled the number of classrooms. Equipment and laboratory space also had a notable increase, about 200 percent,[112] in Mayagüez and 509 percent in Río Piedras.

The generous plan of leaves granted to members of the university faculty has been one of the most outstanding programs of the university. It has offered the opportunity to hundreds of faculty members to improve their training. More than 1,655 such leaves have been granted during the last 22 years at a total cost of over $5,651,839.[113]

The University of Puerto Rico administers the largest scholarship program in the island. This program includes students, faculty and employees. The funds come mainly from Government sources. The students' scholarship program is designed to assure opportunity for education to the greatest possible number of able young people. Its main feature is that economic shortcomings should not deprive able students from acquiring a university education. It has been a very successful program and has helped bring into the Government and private sectors a larger number of able and well-trained persons.

The university has been an important factor in the development of Puerto Rico. The question is, had there been a more equitable distribution of responsibilities between the members of the administration, the faculty and the students; had there been a more democratic process of consultation, had the faculty and heads of departments been more frequently consulted; had their views been taken into consideration more generously in orientation, programing and decision making, would it not have been possible, with the resources made available to the institution, to have much better results and benefits for the people of Puerto Rico?

Problems and challenges facing institutions of higher learning in Puerto Rico.—Before discussing the opportunities for higher education in Puerto Rico, it is pertinent to mention what part of this task has been shared by the private institutions of higher learning. As in the case of the elementary and secondary education, the educational task at the college and university level is shared both by public and private institutions. During the last 5 school years public and private accredited institutions of higher learning enrollment has been distributed in the following proportions:

School year	Enrollment			Private enrollment as percent of total
	Public university	Accredited private colleges and universities	Total	
1960–61	18,893	7,647	26,540	28.81
1961–62	21,262	8,911	30,173	29.53
1962–63	21,892	9,849	31,741	31.03
1963–64	22,959	10,372	33,331	31.12
1964–65	24,809	12,025	36,834	32.65

Preliminary enrollment figures for 1965–66 indicate a record enrollment at the college and university level of 40,681 students of which 26,482 are enrolled at the public university and 14,199, or 34.90 percent, are enrolled at private accredited colleges and universities.

A larger proportion of the enrollment at this level is increasingly being taken care of by the private institutions. This is due in part to the lack of a more rapid growth of the public facilities. This can be attested by the fact that the public university has been increasing its entrance requirements in the face of an ever increasing number of applicants year after year.

Let us examine now some of the problems and challenges facing institutions of higher learning in Puerto Rico.

What is the real opportunity of admission in higher education institutions?—Not all the students who reach the 12th grade in high school can graduate. In 1964 some 20,392 out of 21,950 who started the 12th year of high school at the beginning of the school year could graduate. That is, of the 25 that reached 12th grade for each 100 that entered the 1st grade 11 years before, only 23.5 graduated at the end of the school year. On the other hand, the total enrollment of the first year in all university-level institutions of Puerto Rico in 1964–65 was 9,915 students. Of these 9,915 students, about 20 percent were not freshmen. Thus only 8 out of each 10 opportunities were available for the new high school graduates.

If this situation repeats itself next year, this would imply that of each 100 high school students graduating in May, only 40 can be enrolled in one of our universities in August 1965. On the basis of opportunities available in 1964–65, of these 40, 21 can enroll at the University of Puerto Rico, 11 at the Inter-American University, 4 at the Catholic University, 3 at the Puerto Rico Junior College, and 1 girl in the College of the Sacred Heart.

And what will probably be the situation faced by the high school graduates in the future? A report published by the office of research of the superior educational council in November 1964 entitled Enrollment Projections for the Educational System in Puerto Rico—1965–80, includes a series of projections of the first year, university level enrollment. According to the projections recommended to be used as guides in reference to opportunities of admission to university level institutions available for high school graduates, the first-year enrollment of public and accredited private university level institutions of Puerto Rico will be 22,355 students in the school year 1979–80 (according to the projections, with more probabilities of approaching what will be expected to happen in this level of the Puerto Rican educational system). Graph V shows this projection of the first-year enrollment contrasted with the projection of high school graduates which is likely to be expected.

If the projection of 22,355 first-year students of university level institutions materializes, this will imply that during 1979–80 the universities will accommodate 55 out of each 100 students who graduate in 1979–80 from the public and accredited private high schools of Puerto Rico. This is indeed a conservative projection considering that although it doubles the absolute number of 9,915 of first-year students enrolled in these institutions, it only implies that in 1979–80 we will have succeeded in providing university level opportunities to 55 percent of the high school graduates compared with the present situation which offers these opportunities to only 49 percent of them. In other words, if in 1964 of each 100 graduating students 51 had to find a place in other institutions, in 1979 of each 100 graduating students 45 will have to find this opportunity outside of the university. And if we attain these figures, by that time the number of opportunities for admission to the first year of the university will have to be more than double. Summarizing, the long-term prospects for the opportunities of enrollment of our high school graduates in institutions of higher education, even if enrollment is doubled at this level, shall not be proportionately better than for those who graduate in May 1965 or in May 1964.

Tables 10 and 11 show the relation between the number of high school graduates for the school years 1958–59 to 1964–65, and the applications for admission at the University of Puerto Rico and Catholic University of Puerto Rico, the number of students admitted, and finally the number who enrolled in both institutions.[114] These tables show the great demand for opportunities of study which the institutions of higher education in Puerto Rico face.

Of the 100,099 high school students who graduated (public and accredited private schools) in the 6 years from 1958–59 to 1963–64, 58,623 (almost 59 percent of the total) asked for admission to the University of Puerto Rico during the 6 years from 1959–60 to 1964–65. Of this total of applicants, 27,283 (only 46.5 percent) were admitted to the university and of these 27,283, about 23,422 (40.0 percent of the 58,623) were enrolled. In other words, during the last 6 years, 59 out of 100 high school graduates applied for admission at the University of Puerto Rico; 27 were admitted and only 23 enrolled as freshmen.

Catholic University received during these years a total of 7,891 applications for admission out of the 100,099 high school graduates, which means that 8 percent of these graduates applied for admission in this institution. Of these 7,891 applications, Catholic University admitted 6,077, or 77 percent. Only 4,800 of the 6,077, however, were enrolled at the first-year level; that is, 60.8 percent of the applicants were effectively enrolled at this institution. In conclusion, out of each 100 high school graduates during the last 6 years, 8 applied for admission at Catholic University, 6 were admitted, and 5 enrolled in the first year.

We must point out that in relation to applicants and students admitted there may be duplication, as there are students who apply for admission to more than one university level institution at the same time, trying to be sure of admission in one of them. Nevertheless, there is no duplication in the number that actually enrolls in the first year and so one may arrive at the conclusion that of every 100 high school graduates in the last 6 years the University of Puerto Rico and the Catholic University of Puerto Rico admitted 28 to the first year.

Those who think that were will always be opportunity for entrance in universities outside of Puerto Rico should again think over the situation. At the moment there is everywhere a great pressure to gain admittance to superior education. In some educational circles of the United States, the idea is expressed that for the next school year an increase in applications for admittance is expected and this increase will be over 40 percent of the 1964 applications. The facilities opened by the Federal Government through scholarship programs, economic help, provision of physical facilities, better salaries, etc., will make that pressure more notable, and there will be a greater demand for excellency and potentialities in the candidates for admittance to universities and colleges. University enrollment increased from 2,659,000 in 1950 to 4,800,000 in 1964 in the United States. There is a similar phenomenon in European universities and, to an increasing degree, in Latin America.

According to some recent reports, the students who are more likely to gain entrance are those with higher general ability and higher grades. For example, Yale University had 5,462 applicants but only 1,062 were admitted. Three out of every 10 students admitted had the first or second place in rank in their high school.

There will be more need of knowledge in the future, and there will be more pressure to get it. It will be necessary to utilize a greater diversity of educational means in order to have this knowledge reach everyone, according to his needs. Undoubtedly our welfare will depend more each day on trained talent and on the ethical and moral use of the knowledge placed at the service of man.

What can be done to remedy this situation?—School enrollment projections, the retention graphs we have analyzed, school dropouts, and the lack of skilled personnel to cover the technical and professional jobs created, show the need of a more accurate planning at all educational levels.

The unjustified fluctuations in the number of students who move from one level to the other in the educational system, the organizations that do not provide for the gradual, proportioned promotion of students in the ascending school scale, the reorganizations that use the whole system or a great part of it as guinea pig, the stagnated and even decreasing retention in some school levels, the great number of high school graduates who do not have adequate alternatives to choose from for the development of their capacities, in harmony with their interests and preferences, evaluations made without points of reference or when desired, to serve propagandistic rather than scientific canons, among other factors—a situation which has been pointed out year after year, in different studies—demand a more scientific, reliable planning in all the formal educational system. It is urgent to harmonize more effectively plans of articulation between secondary schools and the university level of education. This problem has been discussed for decades and it still is begging for a solution. For these and other reasons, we have advocated a total reorganization of the educational system, from nursery schools, and kindergartens to graduate and postgraduate levels of the superior education. To talk about a university reform independently of reform in the preceding levels of the educational system, to talk about autonomous regional colleges without having prepared a master plan for educational development that responds to present and future needs of the people of Puerto Rico, is to continue growing up like mushrooms.

We will add more buildings, more millions to the budget, more and more novelties; we will continue our fights for more and more funds while the product of this investment will be like fruit trees that grow and grow, and its fruits, offset by the vicious growth, are not well developed. There is a need to consolidate and strengthen what is good and to create new things, but the new things are not to be used without having been studied. We have suffered much because of novelties. The quality of education should show itself in the citizens' behavior, in their ideals, in their values, in the depth of their convictions. In this aspect some observations made by a reputed social anthropologist who studies aspects of our life are significant. He has recently stated that he notices in our daily life much superficiality, much acting just to let others see, much acting out; much movement, but little depth. Education needs rest to be thought over again; generosity in its leaders, laboriousness in its managers, vision in its leaders. Education—much more so in a country that has faith in its potentialities—should not substitute propaganda for truth.

In 1947, in the study of the research office of the superior educational council, "Problemas de educación en Puerto Rico," we made the statement that follows, which we used at the beginning of Chapter 6 of the Survey of the Educational System: "As our resources are so scarce, in the development of our educational system we should be guided by an eagerness for original creation." This statement gains such urgency at the present moment that we are forced to repeat it, conscious of the fact that more quantities of money, though necessary, are not by themselves the only solution to the problem under consideration.

Educational planning at university level, for example, will not be carried out adequately as long as we lack studies on the following: Utilization of available space; the academic load of the faculty and the timetable of investigators; the results of the admission policy followed; institutional costs; enrollment projections not only of the university level but also of elementary and secondary schools, both public and private; the demands of different professions and of technical and humanistic fields; programing of courses and careers in harmony with those demands; teaching of technical and research personnel; the proportion of administrators to faculty members; the quality, contents, and need of extension courses, and field services; scholarship programs, economic aids, and leaves of absence in relation to the variety of demands and situations; the control and standards systems that facilitate the functioning of the university. The concept of the relationship that should exist between the university that prepares professionals and the different government departments that use those persons in their programs who graduate from the university, should be included in that planning. There should be an awareness of our relations with our neighbors from the north and south and a more deliberate idea of where we should direct our steps. Until criteria that facilitate periodic evaluation are adopted, we will not be able to approach a knowledge of what we are getting with the efforts we are making. These are some of the elements that go into a good planning of university education, and all this fits into the picture of what we hope will be the course of Puerto Rico within the next 10, 15, 20 or more years. Of course, all plans for the future should be flexible, within probabilities deliberately analyzed and studied. This will not be attained if it is formulated only on the bases of guesses or momentary inspirations. We must admit, in justice, that some of these elements have been taken into consideration and some of these criteria have been put into practice.

If the University of Puerto Rico is going to make the best use of the money the legislature generously assigns to it, it must work on the basis of the best planning of economic and human resources. Planning cannot be done, either, exclusively on the basis of administrators' criteria. The experience and knowledge of all the sectors that make up the institution—professors, students, and administrators—must be used in that planning. This does not mean that students are going to determine the guides to be followed; it means that they should be heard in relation to facilities, rules, standards, and practices that will affect them directly. Not to count on the faculty would be to limit things extremely.

Superior education is moving fast to be able to keep up with, and if possible, to get ahead of, the rapid changes that occur in our society. Training for the different careers has changed in a marked way. Agriculture is not the same today as yesterday; trade is different; there are many new kinds of tools and fertilizing techniques. Business administration training is today completely different from what it was 10 years ago. There are today electronic machines, computers, chains of stores, supermarkets. The medical profession has changed and it changes from month to month. The heart is operated on, kidneys are transplanted, the body is frozen to facilitate operations, there are magic drugs and antibiotics.

One of the most conservative professions, the teaching profession, has had to take charge of the radio, television, recorders, metronoscopes, and the new courses in science and mathematics, activated by the sputniks. Geographical concepts are altered, social sciences have such dynamism that they force the professor to gallop to be able to maintain himself partly informed of what happens in the society in which he lives. In such a world, planning, orientation, and reliable, informed scientific direction, are urgent.

In order to understand better the key problems of the University of Puerto Rico it is advisable to resort to excerpts from various reports made by the Middle States Association of Colleges & Secondary Schools, which is the accrediting body of the University of Puerto Rico, the team of experts whose reports form part of the most recent "Study of the Educational System of Puerto Rico," and other sources which in one way or another present the basic issues confronting the institution. There have been in recent years dozens of studies of the university. On pages 2028 to 2040 of the report of the "Study of the Educational System" are summarized the positive and negative aspects of the university shown in not less than 13 of the most important of said studies and reports. This constant flow of studies and experts, prompted Dr. Frank H. Bowles to state:

> * * * it is patently useless to attempt further comments on details of governance, administration, standards, curriculum, or other operational matters. The fact is that the University of Puerto Rico, over a period of nearly twenty years, has been, largely on its own initiative, so examined, studied and reviewed that the chances of producing commentary on any of these points which will add to the knowledge already accumulated are negligible.[115]

The Middle States Association in its report of November 1959, reaffirms Bowles' comments.

Although some positive changes have recently taken place forced by the faculty and students' unrest, by the criticisms of reports and by the pressure for university reform, most of the main recommendations of these reports, and precisely the most significant, are still unattended to by the administration of the institution.

The following are some of these significant aspects relative to the university:

QUALITATIVE CONSIDERATIONS

Certain qualitative considerations characteristics of the situation require rehearsal here.

1. The University is suffering from excessive contemplation. Never has there been an institution which has been so supersaturated with experts, evaluators, observers, advisors, paid and unpaid, skilled and unskilled. In Latin America, too, everybody considers himself a qualified critic on any subject and the University is no exception.

The University has looked (up) too long or too much to the *norteamericanos.* There has been a constant flow of advice to the University. Too, the magnetic draw of the exotic, irenical Caribbean makes it easy for the University to secure skilled advice and consultation from the Continent. Many people would volunteer—the University pays them.

The University is now the repository of more suggestions and recommendations for improvement than it could possibly give practical effect to in years to come. Some of this advice (and it occurs more often than chance would suggest) is contradictory, both with itself and with the purposes of the University. Some experts have avoided making the small errors as they swept on to the grand fallacy. One man's baby has sometimes been another man's bathwater.

The University needs to be left alone. By the same token it needs to give practical effect to much that it already knows.

2. The University is a product, in its purposes, curriculum, administration and so on, of its own peculiar milieu, composed of two traditions: the democratic, new-world American and the authoritarian, aristocratic, old-world Spanish. Some would suggest that there is a separate Caribbean—Latin American influence. Sometimes this uniqueness has been ignored or forgotten by those advising the University.

For instance, both English and Spanish are required languages in the undergraduate curriculum. Such a dual emphasis necessarily results in less provision for curricular depth in other areas.

The Chancellor has, by law, extraordinary powers as the chief executive officer. One is reminded of Mosaic sovereignty (take your choice between the biblical or Knickerbocker variety). Such authority was, perhaps, necessary for the development of the University under any circumstances immediately after reform measures were instituted in the '40's. But it is also quite possible that the University's Spanish tradition had something to do with the statutory provisions affecting the institution.

3. Deriving from the second circumstance that the University is a product of its own milieu, it should be noted that substantially more than is characteristic of a continental institution, the University of Puerto Rico is an integral part of its culture. Much more than is the case on the mainland, the University is on intimate terms with the vital and vibrant thrust and purpose of its people. It is hard to convey the difference. It is typical of Latin American institutions that they are less distinct from their general communities.

That fine phrase *Alma Mater* has a richness and cogency of meaning for the people of Puerto Rico which approaches a biological literalness. Its life is their own. The University is, to use Cardinal Newman's term, a "fostering mother."

But the University, because it is also unlike Latin American institutions, is considerably more stable than they are.

Thus, "the University of Puerto Rico is neither the relatively isolated and socially autonomous university of the United States nor the politicized and shaky institution typical of many Latin American communities undergoing significant social transformation," to use the Chancellor's recent words.

The Island's basic needs—social, cultural, political, scientific and civil—are just as much the concern of the University as are the more usual academic values and functions such as imparting knowledge, searching for truth, academic freedom, and so on.

4. It is important to know that in a very real sense the University stands squarely in the land-grant college tradition. This orientation has implications for the University somewhat different from those to be derived from the other qualitative influences mentioned.

For one thing, this means that the University is committed to the extension of educational opportunity to the greatest possible numbers of those who can profit from it and desire it.

The University, as will be shown, is not fulfilling this commitment which is the first of two pillars characterizing American higher education. Neither is it well advanced in implementing the second mandate of American higher education, namely, an education on the highest level of skills in all advanced fields of learning.

An implication of the land-grant philisophy of the University is that, should it seek additional advice from continental consultants, these should in fair measure be drawn from educational contexts deriving from a similar orientation. Too often in the past the University advisors, drawn primarily or exclusively from private institutions and background, have surveyed it with a biased angle of vision. What is thus recommended sometimes reflects the prejudices of an outlook and purpose wholly incompatible with a different humanistic inspiration and philosophical persuasion. Whole answers do not emerge nor are some of them even appropriate.

Columbia, in particular, as a source of advice and advisors, has been a tremendous influence on the Island and in the life of the University. But cannot a legitimate question be posed here? When even two of the University's small number of trustees are faculty members of this distinguished continental institution, should not the University seek to diversify the origin of its advice? One institution as a source of influence can be neither infallible nor omniscient.

5. The institution has a number of pressing problems. Probably none of them is different from those experienced by continental institutions. But as an advisor of the University has suggested, the "University is unique in that it exhibits the whole range of possible problems".

The relative youth of the University; its inexperience; its rapid expansion; its culture: the hunger for education as a part of the new familiar "revolution of rising expectations" in which Puerto Rico is also a participant; mixed with the explosions familiar to the rest of us of population, knowledge, and its practical application; these things would complicate the life of any administration and any faculty.

Add to these a conflict of several personalities and charges of political interference and activity, and one gains some insight into the problems of the University and its Chief executive officer. Sometimes those on the Island, both within and without the University, believe their educational problems to be unique; that their weaknesses are not familiar elsewhere. But much of the concern about the University and its current criticisms are manifestations of a rather universal and warm interest in education today. The tendency to blame education in America for all our troubles is not without example in Puerto Rico. Education is played just as close to the chests of Puerto Ricans as it is to the American bosom. Fecundity overwhelms it in both places.

Such understandings do not solve problems; but they can bring serenity and mutual understanding which make problems easier to cope with.[110]

Dr. Frank H. Bowles in his report, previously quoted, has this to say:

1. GROWTH AND PRESENT STATUS

The development of the University of Puerto Rico during the past twenty years stands, by any standard that may be applied, as a major achievement. During this period, what was in fact a relatively small, poorly equipped college with a poorly trained, underpaid, and overworked faculty, a meager and outmoded program of studies, and generally poor academic standards, has become a complex university with a large enrollment, greatly improved facilities, including many excellent new buildings, good equipment, a much improved faculty, a diverse program of studies, and academic standards which, while not uniformly strong, are at least much higher than they were at the beginning of the development. Even considering all present deficiencies, this development stands as a remarkable achievement.

The achievement is not the product of the work of any one man, or even any identifiable group of men, though much credit for it must go to the relatively small group of men, including the present Chancellor, who provided the original leadership, and to governmental policies which supplied political, moral, and financial support during the recurrent crises of the first stages of development. Beyond this leadership and its essential support, there are many others—individuals, groups, and organizations—who had an important share in the creation of the present university—young graduates of the university who cut short their own studies to accept administrative tasks which they mastered by trial and error, often remaining at the university at a personal sacrifice instead of taking more lucrative positions elsewhere, young teachers and administrators from other colleges and universities who brought their interests and enthusiasms to the development of new programs, universities in the continental United States assisting through scholarship grants in the training of prospective faculty members, foundations that supported new undertakings and gave freely of their advice and counsel, and, not least in the roster of credits, the people of Puerto Rico who responded to the challenge of opportunity with an eagerness which literally forced the institution into a growth that would have been unbelievable to those who had known it in earlier days.

As a consequence of this change, Puerto Rico has received from its many investments of money and of the time and faith of men and women who devoted themselves to teaching and administration benefits which are literally incalculable. It has had civil servants and public administrators for a new and vigorous government, teachers for an expanding school system, engineers for its buildings and its public works, specialists and technicians for its growing industry, professional men to meet expanding needs in law and medicine, scientists and technicians to improve its agriculture.

Not all of these accomplishments have been well done. There have been mistakes, programs badly planned and ineptly administered, stubborn refusals to change when change was needed, poor use of skills, poor choice of men, needless misunderstandings, unedifying bickerings, failures in cooperation, public exhibitions of ill will. But, despite all of these, in the weighing of credits and debits, the university stands today as an accomplishment in which the people of Puerto Rico may have a justified pride. More important, despite its faults and problems, it stands as the base on which another great advance in education may be supported.

2. PROBLEMS, PRESENT AND FUTURE

The university as it stands today faces what may well seem to the observer an almost limitless series of problems. Some of these problems are external, having to do with relations to other branches of government and to other organizations and groups. But these problems, despite their ominous aspects, are not the university's true problems. They affect individuals and sometimes hamper decision making and cooperative planning, but they do not, at least in their present form, endanger the mission or the standards, or the intellectual stature of the university. To the extent that these are threatened, the true threat lies within the university.

The university's internal problems may be divided into three groups: academic development, administration, and finance.

The problem of academic development is a serious, perhaps a fateful, one for the university. It has been built for twenty years in terms of the concept of the provision of opportunity. Opportunity in Puerto Rico has long been masked and inhibited by low economic potential combined with an accumulated academic deficit of staggering size, a deficit which, if it could be computed, would have to be measured not in terms of minimum literary standards, but rather in terms of the preparation—or lack of it—of a large percentage of the labor force for the tasks of an industrializing society. Because of these two factors, the University has been developed in terms of very low costs to students (achieved by large subsidies per student) and relative ease of admission.

In the course of this development, little attention has been given—perhaps only very little attention could be given—to the lifting of academic horizons through research, investigation, advanced study, and the creation of new knowledge. It may be argued that the length of radius of its academic horizon is the true measure of an institution and that a University whose horizons have a short radius is not a true university but an overgrown college. However, this argument is beside the present point which is the practical one that a university which cannot provide at least the fundamentals of advanced training for its prospective teachers must rely on other institutions to make up for its own deficiencies. In a small institution this is not a serious problem for it can draw its new teachers and scholars from other institutions, but in a large one the problem assumes major proportions. It would not be fair to say that the University of Puerto Rico has ignored this problem for it has developed a program for training its faculty members in other institutions, but it is fair to say that the size of the problem has outgrown the solution and that the present program cannot supply the trained faculty members the University requires. If it supplies the numbers, the individuals cannot all have time to reach the level of education desired; if it obtains the level of education required, it cannot have the numbers. Thus, in a sense, the University has outgrown its program, for it now requires more and better faculty training than it can obtain. Its only alternative for the training of young faculty now remains the establishment of a true graduate program. With such a program it can attain a new measure of internal self-sufficiency and in the process extend the radius of its academic horizons, entering the company of the great universities which draw students and scholars from other institutions. It has, of course, the alternative of recruiting mature faculty from other institutions, but this can hardly be a large-scale process. Ordinarily, faculty recruiting of this type is done for the purpose of strengthening rather than enlarging a faculty.

The problem of academic development has another aspect aside from the scholarly one. This is the need for opportunity, and it is one which may be ignored easily in the course of preoccupation with new programs and new levels of academic prestige. The University of Puerto Rico has not entirely neglected the provision of opportunity at the lower end of the academic spectrum, but it has treated it as, at best, an incidental and pro forma operation. Actually, the University's growth has not liquidated Puerto Rico's academic deficit, but in some ways has accentuated it by widening the gap between those who have achieved a measure of education and those who have not. Such a gap is always a tragedy and, at worst, it is a danger to the political health of a state. The problem of closing the gap is not a glamorous one, for it can be closed only by the patient building of educational foundations; it is, however, a task that is inherent in the responsibilities of educational leadership. To close it the University must build a new program; if necessary, define new forms of University activity: and carry its programs deeply into the communal structure of the Island. In such a program it is not important that the standards or the subjects be those of the basic university curriculum, but that there be standards and subjects which will draw new groups of students within the University's reach and influence. Such a program cannot instantly wipe out an educational deficit for it will not succeed on a large scale in educating men and women who are already grown up to the highest university standard, but it can add to the stature of individuals who, importantly, may be the parents of university students to come.

The problem of administration, present and future, is of a different order from the academic problem. Any administration has essentially two tasks: to operate a going concern, and to plan its later forms and developments.

With respect to the first of these tasks, the present administration, despite faults and troubles, does function. It is obviously overcentralized; it is often inexplicably slow-moving, sometimes indecisive, sometimes inefficient, and always obviously overworked, but it does operate a going concern.

However, with respect to the second of its responsibilities, the view is less favorable. In the face of clear needs and problems to be faced, the University has no apparent plans save with respect to physical expansion. Such major problems as coordination of instruction, simplification of organization, the building of a graduate school, the development of student exchange with continental universities, the expansion of faculty to deal with the certainty of increased enrollment, the reorganization of administration to handle an expanded program, the provision for students now excluded by the present admission standards (which is assuredly part of a public university's responsibility), the extension of university programs into communities which now have no contact with them, closer cooperation with industry—all of these are known and admitted problems, but there are at best only fragments of plans for dealing with them, and few of these fragments have reached the point of presentation in operating form, nor have there been any projections of cost, faculty requirements, or facilities to be required.

If it be assumed that the University has grown to its present position according to plan, then it must be said, first, that the plan contained some obvious gaps which have been filled in with improvisation and, second, that the plan is now outgrown. If such be the case, then the University faces a direct danger—the danger of planless growth.

3. THE DIMENSIONS OF PLANNING

If the University is to serve Puerto Rico in the future as it has on the whole served well for the past two decades, it must begin by facing the fact that its present program and organization are inadequate to meet new demands for knowledge and training. It has already been noted that the program of faculty training is not providing enough faculty with enough training, and that there [illegible]o university-wide organization of instruction. It has not been emphasized that, while these are not uncommon problems in institutions that have grown rapidly, they are effective—indeed, disastrously effective barriers to further growth.

Thus, while it is unimportant that the majority of its teachers are drawn from its own student body, it is important that the number who have attained academic distinction is too small to provide leadership for a university—and that some who have done so have left the University—and it is important that it appears difficult to find new teachers of the quality required.

It is perhaps unimportant that the responsibility for coordination of instruction is placed in the hands of a junta of deans who have only advisory powers, but it is very important that because of lack of coordination it has proved impossible to develop an all-university effort to establish a graduate school. In fact, the lack of coordination tends to confine programs within their present boundaries and thus to actively inhibit growth and development.

It is by no means unimportant that both the faculty and the student body are without organization or effective voice, but the issues as to the nature and details of organization for each of these bodies are not nearly as important as the question of the purpose of organization. Presently, without any voice, both bodies are unclear as to their role in the University and have confused the issue of their own desire for a measure of self-government with the issue of responsibility for administrative decisions affecting students and faculty.

These items, then, are examples of limitations imposed by what is essentially unfinished academic housekeeping. This housekeeping must be done before effective plans can be made. This is a problem, but not an insuperable one for all of these matters can be dealt with. Taken all together, they do not represent as much of a task as the reorganization of the University in 1942.

Assuming the creation of a climate favorable to planning, the University must then face certain other facts:

First, the University as the dominant educational force in Puerto Rico, must be for Puerto Rico what all of higher education is for the continental United States. That is, it must provide excellence and diversity at the same time, must meet local needs, or see them go unmet, or sit by as other instrumentalities are created to meet them with inevitable wastage and duplication of effort.

Second, the University, though dominant, cannot be dictatoral. It cannot prescribe the detailed behavior of other institutions, limit their programs, fail to work with them on common problems, or deny such common institutional rights as the certification of teachers or the introduction of experimental programs.

Third, the compiling of statistics and projections is not planning but the raw material of planning. The construction of a new building without consideration of the program for which it may be used in twenty years is to accept the risk, perhaps the certainty, of premature obsolescence, and the opening of a new program without calculating the demand for its offerings or its effects upon the university curriculum is to court academic disaster. Buildings and programs follow upon a findings of need, but the need is determined not by numbers but by use, and the determination of use is the essence of planning.

Fourth, the University's present level of financial support and, more importantly, its present philosophy of support which subsidizes between two-thirds and nine-tenths of the cost of a student's education cannot survive as a basis for forward planning. The experience of continental state universities has established that tax support cannot be expanded indefinitely and it cannot be otherwise, in the long run, in Puerto Rico. In the future, the best can be hoped for is the provision of expansion capital plus a modest subsidy for educational costs to be drawn from tax sources. Inescapably, Puerto Rican students must pay a larger part of their direct educational costs.

Fifth, plans which are based on the expectation of change also beget change. There cannot be a university plan, only a series of plans, subject to review and renewal from year to year. In the making of these plans, faculty and administration both have their roles, but these roles are determined by the statement of purposes and goals and these are a matter of policy to be determined and enforced by a governing body which cannot abdicate or delegate this responsibility.

Sixth, change comes at a cost and it would be well having the nature of these costs understood. They cannot all be foreseen and listed in a brief statement, but certain of them are obvious. They are:

(*a*) Expansion and decentralization of administration.

(*b*) Expansion and decentralization of instruction, including a major development of extension and evening programs.

(*c*) A detailed review and consolidation of existing programs.

(*d*) An effective organization for the coordination of instruction with a reduction in prescribed courses, a reduction in the offerings of elementary courses, and an expansion of offerings for advanced courses.

(*e*) A major increase in University income, including within ten years a doubling of present student fees, with such adjustments in the way of scholarship and loan programs as may be required.

(*f*) A doubling of present enrollment within twenty years.

(*g*) A doubling of present faculty within ten years, including the addition of a substantial number of mature teachers drawn from the faculties of other institutions.

(*h*) A reworking of the present faculty training program to include use of the University's own resources for fundamental advanced training and emphasis on the use of education subsidies for experienced teachers going on for their final degree.

(*i*) A doubling of faculty salaries in the upper brackets to provide adequate holding power for experienced faculty and adequate incentive for younger faculty.

Seventh, there is no need for a further general review of the University before planning can be undertaken, nor for the importation of new consultants or specialists. The University's present problems and the general shape of its future tasks are now known. The need now is not for more reports, but for a program for utilization of the University's own resources, which include competent and devoted faculty, capable administrators, and a vast accumulation of experience. If these are applied to its problems, its problems can be solved.[117]

Dr. Frank H. Bowles further states:

The basic and controlling fact with respect to the University of Puerto Rico is that as an educational institution it is operating below the quality standard which is indicated by its capacities and resources, and what is more important, below the level required by the needs of Puerto Rico.

There are many causes which contribute to this fact. Some are products of its system of governance and control, some are the direct result of decisions and actions taken or not taken, some are the result of an artifically perpetuated isolation, or of failure to forecast and build in terms of approaching needs, and some, notably the poor standard of preparation of its entering students, are beyond its direct control but, indirectly are an important problem for which it must find a solution.

The problems of Puerto Rican education in general are not unlike the problems faced by educational systems in the continental United States. That is to say that they are rooted in a tremendous surge of popular demand for education which forces an over-rapid expansion of educational facilities and opportunities with an inevitable lowering of standards during the expansion period. But Puerto Rico appears to differ from many continental systems in which this expansion and the lowering of standards has taken place in that it has accepted and tried to meet the need for expansion without recognizing that standards have been lowered in the process. Thereby the lowered standards have become embedded in and have affected all tax supported education on the Island.

In these terms then, the first step in the solution of the problems of Puerto Rican education is to evaluate and reorganize the programs, to assess and reorder resources, and to reach internal agreement as to priorities—in a word to pause, evaluate, and consolidate.

The task is a large one but it is to some extent made easy by the fact that it has been repeatedly postponed and delayed. The delays have revealed, as no amount of professional probing could have revealed, the areas of strength and deficiency, and the needs not being met that must be met. In the light of what has been so revealed it is a reasonable estimate that an immediate and vigorous attack on the problem will produce noticeable improvement in educational quality within two years and a general improvement within five years.

The result of such improvement would be traceable in several very specific indicators: an increase in the number of children of school age continuing in primary and secondary school to completion of their studies; an increase in the average term of employment of primary and secondary school teachers; an increase in the percentage of college and university students who complete their studies; an increase in the number of college graduates continuing their studies to advanced degrees; and an increase in the number of university graduates trained in the professions, occupations and skills so urgently needed by the government, the educational system, the agricultural and technical enterprises and the commerce and industry of the Commonwealth. In other words, these are all problem areas which are now affected adversely by existing educational deficiencies.

As a final * * * observation it must be stated emphatically that neither administrative shifts nor paper reorganizations of programs will in themselves effect the urgently required changes. The reshaping must be an enlargement of program, a radical improvement in standards, a renewed commitment on the part of teachers, a serious drive towards quality and achievement. It must affect public policy and governance; planning and control; budget making, finance and support; administration and organization; programs and standards; student life and citizenship; faculty recruitment, tenure, pay and promotion; the relationship of secondary education and higher education; and the development of graduate education, adult education, technical education and international education.

Such reshaping will inevitably change established patterns and standards and will require new lines of authority and control. Above all it will require a common belief in the values of education and a unity of purpose which will override the temporary discomforts of change.[118]

There is another very significant aspect of the governance of the University well taken by the late Dr. Ernest V. Hollis, head of the Division of Higher Education, Department of Health, Education, and Welfare, Office of Education of the United States, who, although not in his official capacity, studied and reported on the Organization for the Governing and Administering Higher Education in Puerto Rico (August 4, 1959) for the Study of the Educational System of Puerto Rico.

ROLE OF THE COUNCIL

The Legislature has for the most part done a commendable job in defining the scope and character of the role of the Superior Educational Council. It has, moreover, usually delegated authority commensurate with the responsibility given to the Council. There is, however, one important exception to this generalization.

Those who plan or enact legislation for the further development of the University should reappraise the intent of Section 634 of University law. This is as important as earlier recommendations for a new look at factors that should be considered in determining the Council's optimum size and composition. Section 634 reads as follows: "The Superior Educational Council shall make a survey of the educational situation in Puerto Rico, with a view to the general orientation of the educational process in harmony with the basic needs of people in a democracy, and shall formulate the normal principles that it believes valid and advisable for the system of public education in general and for the coordination of said system with the University of Puerto Rico, in its several functions. For the said purposes, the Superior Educational Council may, from time to time, make surveys of the educational problems in Puerto Rico, and shall give the results and conclusions of said surveys to the Department of Education in Puerto Rico for such use as the latter may deem advisable. The Superior Educational Council shall, in addition, study and adopt, always taking into account the declared purposes of the people of Puerto Rico in regard to its University, the cardinal objectives which are to constitute its orientation.

"Does Section 634 merely express a vague but deep feeling of the representatives of the people that there ought to be better articulation and coordination between the public schools and the University? Does it lack specificity because the Legislature did not know how to secure the articulation and coordination it appears to have desired? Or did this lack flow from political opposition to the Council having any authority over the Department of Education? These questions can be answered only by those who know the history of the legislation. It is a fact, however, whatever its reasons for inaction may be, that the Council has not undertaken any substantial work to implement Section 634. Indeed, the more comprehensive survey of education in Puerto Rico, of which this report is a part, has been undertaken only after prodding from the legislature.

"The first sentence of Section 634 clearly mandates the Council to set the goals for elementary, secondary, and higher education in harmony with the declared purposes of the people of Puerto Rico. The last sentence reinforces and extends this mandate with regard to the University. The role the Legislature envisioned for the Council, in other words, is that of the planning board for all public education in Puerto Rico; but so far as elementary and secondary education is concerned, apparently all it can do is 'give the results and conclusions of said surveys to the Department of Education of Puerto Rico for such use as the latter may deem advisable.' The Council is equally without authority to enforce the mandate given it in the first sentence to develop principles and policies for articulating and coordinating the public school system with the University."[119]

Dr. Hollis continues:

> Large sums have been assigned and notable efforts made to keep the University abreast of enrollment and program demands. The Governor and the Legislature, as elected representatives of the people, have been generous in supporting the University. The Chancellor, his staff, and the faculties have been untiring in their efforts. [Here are quoted statistics to substantiate the tremendous growth of the University, that are included, up to date, in other parts of these reports.]
>
> Despite this spectacular growth, the University today has essentially the same administrative organization and operating procedures that were in use in 1942. They were inadequate and cumbersome 17 years ago, but by today's management concepts, they are archaic if not impossible. A substantial share of the distrust and waste of money and talent at the University of Puerto Rico can, without doubt, be traced to outmoded ways of doing business.
>
> It is ridiculous, for example, for the Council to try to administer an enterprise of the scope and character just sketched with only two officials that have University-wide responsibility. These two, the Chancellor and the Dean of Administration, moreover, are also the chief administrators of the Río Piedras campus.[120] And to make matters worse, they are not always sure which official hat they are wearing. The lack of a division of functions between the two adds to the confusion. As a matter of fact, the Dean of Administration is an *alter ego* of the Chancellor for units of the system outside Río Piedras and the unofficial vice chancellor of the unit there.
>
> A close-up picture of the work of the Chancellor and the Dean of Administration shows each of them trying to supervise from 20–25 subordinates. This span of control is two to three times the number management experts have found one individual can supervise satisfactorily. And what is even worse, because of the confusion between central office and Río Piedras functions, half of the 25 subordinate officials report directly to both the Chancellor and the Dean. This lack of supervision is frustrating and undesirable for all concerned, but especially so for those individuals whose responsibility and authority are only hazily defined. The situation is as great a detriment to sound administration as allowing institution-wide authority only to the Chancellor and the Dean of Administration.
>
> In so muddled an administrative situation, the emergence of anything resembling university system policies is likely to be coincidental. The Chancellor and the Dean of Administration, if it must be said plainly, are absentee landlords who give ten percent of their time to Mayagüez, San Juan, other outlying units, the agricultural experiment stations and extension services, and ninety percent of their time to the Río Piedras campus. Policies of the Commonwealth Personnel Office and the Treasury Department, to put it bluntly, do as much to coordinate the separate units of the University as to the policies and plans of the Council through the Chancellor. Indeed, a closeup look at University organization makes it clear why the Governor and his department heads have not trans-

ferred to the Council full authority to manage its funds[121] and its non-academic personnel.

The defects in organization for general administration carry over into the structure for academic administration and business administration. There are no principal officers or bodies in a position to concentrate on planning and coordination in these areas for the University system. Indeed, there is no one officer on the individual campuses who is specifically responsible for either academic or business affairs. Such an office exists for academic affairs at Río Piedras, but it has never been filled. In business affairs at this campus, the Director of Finance and the Treasurer are coordinate officers, and their administrative relationship to some six subordinates, including the University budget officer, and to Treasury Department officials is not clear. At the Mayagüez and San Juan units, the business officer's responsibility is only slightly less confused.

Defects in current academic organization, aside from a common lack of unified leadership, are of a different order to those in business administration. Here everybody is in the act and the machinery is cumbersome. And it is equally to the point to note that each group has legislative authority for its role in academic affairs. First, alumni and students are assured a channel for making their views known to the Council. Second, by statute all college teachers are assured academic freedom which the Council and the administration must honor. Next, the entire faculty (the Claustro) of a campus has certain legislative and advisory responsibilities. More specifically, the Legislature gives the faculties of some 13 colleges of the University independent statutory authority to participate in six named aspects of University affairs.

In addition, both the Río Piedras and Mayagüez units have statutory *University boards* which advise and collaborate with the Chancellor in carrying out the University program. The existence of two such bodies permits the inference that they collaborate only on local problems and that there are no University-wide policies in the vital matters with which they deal—such as by-laws, budget, personnel, promotions, faculty welfare, and student discipline.

The Council, the Chancellor, and the faculties are not unaware of the inadequacies of the University's structure and operating procedures. Indeed, their zeal for democracy and their distrust of each other may account for so many legislative enactments to protect rights that in the States are assured by governing boards by-laws and regulations. The apparent lack of mutual trust and confidence has saddled the Council with statutory provisions that highlight and tend to perpetuate the separateness of groups that ought to be united and wholeheartedly engaged in promoting a common enterprise.

RECENT REORGANIZATION PROPOSALS

While not aimed directly at the weaknesses in organization and procedures just discussed, the Chancellor and his staff and, separately, the Council, have made several limited studies which concluded with proposals for improving isolated major procedures and organizational arrangements * * *

The chaos in academic organization is so critical that in evaluating the accredited status of the University in 1954, the Middle States Association of Colleges asked that consideration be given to revising the role of the Dean of Administration, to the creation of an academic dean or vice chancellor, and to the need for better curriculum coordination and the integration of departments into larger schools and colleges. The Association also asked for more and better inter-campus relationships. In the present state of disunity and disjointed organization, nothing significant has been done to improve the four fragments of academic administration cited as crucial needs by the Middle States Association of Colleges. [Except the appointment of a Dean of Studies.] [122]

Dr. Hollis added that:

> The first step in governing and administering so complex, large, and far-flung a university effectively calls for the abandonment of centralized administration and the strengthening of centralized policy-making and coordination. What the Council needs most is an overall policy that recognizes the University as a system of articulated institutions rather than as one large organism with tentacles in all parts of the Island. Until there is a genuine acceptance of the articulated institution concept, no useful purpose will be served by devising and adopting an organization geared to central planning, policy-making, and coordination, and to decentralized administration.[123]

In a memorandum on aspects of the organization and administration of the University of Puerto Rico, prepared for the chancellor of the University of Puerto Rico by Dr. Floyd W. Reeves, these statements are made:

> Although the Chancellor of the University of Puerto Rico has been designated as the Executive Director of the University, at no time has he been able to function fully in that capacity. It has not been possible for him to do so for two reasons: (a) a faulty administrative structure through which the University is required by law to operate, and (b) an inadequate staff of qualified persons attached directly to his own office.
>
> Among the ways in which the University has suffered because of these deficiencies are the following:
>
> 1. Public relations of the University have at times been less than satisfactory.
> 2. Planning for the long-range future of the University, including both planning to secure coordination of activities and programs within the University, and planning to secure coordination of the institution's activities with those of other public and private agencies is less complete than is desirable.
> 3. The central administrative offices at Río Piedras have not always been able to give adequate attention to programs at the Mayagüez campus, the Experiment Station, and the Agricultural Extension Service, or to the coordination of such programs with each other and with those of the colleges at Río Piedras and the Medical School at San Juan.
> 4. Inadequate attention has been given to the relationship between University programs and the programs of the elementary and secondary schools, and to ways and means through which each may strengthen the other.
> 5. Inadequate attention has been given to the possible advantages of securing some degree of decentralization of the educational programs of the University at the junior college level, as well as to the development of some mechanism through which an optimum degree of decentralization might be secured * * *
>
> I am not surprised that these weaknesses exist with the present unsatisfactory university organization. I am surprised that the University, regardless of some weakness in its structure and regardless of overburdened officers in the central administration of the University, has during recent years made a record of outstanding achievement equalled by few, if any, institutions with which I am acquainted.[124]

All of these statements lead squarely to this important recommendation made by the survey commission of the Middle States Association in its report of 1959 and which has been just recently restated by the planning board of Puerto Rico as an urgent need:

> D. *The formulation and approval by the Superior Educational Council of a Master Plan for the future development and expansion of the University in relation to physical facilities, financial resources required, projected enrollment, and educational programs.*[125]

In a similar vein Dr. Ernest V. Hollis adds:

> Certain bedrock educational and managerial principles also underlie recommendations for a new organization for administering the University. They assume that planning, policy determination, coordination, and the final act of governing, in the last analysis, must be done for the University as a whole—perhaps for public education as a whole.[126]

III. Structural Characteristics of the Educational System

ANALYSIS OF PRESENT PROVISIONS AND PROCEDURES

The Commonwealth

The Constitution of the Commonwealth adopted in 1952 has the following provision relating to education in section 5 of article II:

> Every person has the right to an education which shall be directed to full development of the human personality and the strengthening of respect for human rights and fundamental freedoms. There shall be a system of free and wholly non-sectarian public education. Instruction in the elementary and secondary schools, shall be free and shall be compulsory in the elementary schools to the extent permitted by the facilities of the State * * * No public property or public funds shall be used for the support of schools or educational institutions other than those of the State. Nothing contained in this provision shall prevent the State from furnishing to any child non-educational services established by law for the protection or welfare of children. Compulsory attendance at elementary public schools to the extent permitted by the facilities of the State as herein provided shall not be construed as applicable to those who receive elementary education in schools established under non-governmental auspices.

The government and education.—There is no doubt that education has a central place in the governmental structure in Puerto Rico. The Constitution provides (sec. 6 of art. IV) that there is to be a department of education along with departments of state, justice, health, treasury, labor, agriculture and commerce, and public works. Section 5 of the same article authorizes the Governor to appoint certain secretaries, with the advice and consent of the senate, who are to assist the Governor in exercising executive powers. These secretaries, including the secretary of education, constitute the Governor's advisory council, which is designated as the council of secretaries.

State agencies and voluntary organizations other than the department of education also have a decided impact on the educational program.

The Secretary of Education.—As previously pointed out, the Secretary of Education is a member of the council of secretaries appointed by the Governor with the advice and consent of the senate, and may be removed by the Governor at his discretion. The broad powers of the Secretary of Education may be shown by quoting excerpts from two sections of the law. Section 141 authorizes him to establish a system of public education.

> The Secretary of Education is hereby authorized and directed to establish and maintain a system of free public schools in Puerto Rico for the purpose of providing a liberal education to the children of school age, i.e. between the ages of five and eighteen years; to establish higher institutions of learning, including colleges, universities, normal, industrial, mechanical and high schools, together with such other educational agencies as said Secretary may find necessary and expedient in order to promote the educational development of the Commonwealth. In addition to the rural and graded schools which shall constitute the regular common school system, said Secretary is hereby authorized and directed to establish, maintain and direct, so far as the resources placed at his command will permit, such special schools as in his judgment are necessary to meet special education needs * * *

Section 142 of the law deals with his duties. The scope of his duties is shown by the following quotation from the section:

> The Secretary of Education, being required to supervise education in Puerto Rico, shall audit all disbursements made in extending it. He shall appoint, as occasion may require, an officer for each school district to be known as the Supervisor of Schools, and these supervisors of schools shall in all respects be subject to the orders of the Secretary of Education. The Secretary shall decide upon and make known the school curriculum; conduct all the examinations for the distribution of teachers' certificates; fix the salaries of teachers, provided the sums so allocated are not in conflict with law; select and purchase all such school books, materials and supplies as may be necessary for the proper conduct of education, except as otherwise provided by law, and shall approve all projects and plans for school buildings to be constructed in Puerto Rico, when the same are to be paid for by the Commonwealth of Puerto Rico; but when they are to be paid for by the municipalities, or by the municipalities and the Commonwealth of Puerto Rico, then the school directors shall participate to such extent that no project or plan shall be approved without the consent of the respective school director. The Secretary of Education shall require and gather such statistics and reports from the school directors and school supervisors as he may from time to time deem beneficial to the school system, and he shall make such regulations as he may deem necessary for the effective administration of his office.[127]

As pointed out in numerous studies the Secretary of Education in Puerto Rico has far more power than is given to any State commissioner of education in any State.

The Department of Education.—The Department of Education in Puerto Rico has undergone an evolution similar in many respects to that which has occurred in most States in the United States.

The department is headed by the Secretary of Education who is responsible for its organization and operation as well as for the establishment and operation of all public schools in Puerto Rico. The school system in Puerto Rico is a highly centralized enterprise as may be easily confirmed by the laws quoted above.

Structure of the Educational System

1. *Elementary school.*—Grades 1 to 6 in rural or urban zones.

2. *Junior high school.*—Grades 7 to 9 in rural or urban zones. In the rural zone the school may be organized as a regular junior high school or as a rural second unit.

3. *Senior high schools.*—Grades 10 to 12 mostly in the urban zone although as of June 30, 1965, there are three schools of this type in the rural zone. The senior high school curriculum provides for a general course of studies and for a vocational course.

4. *Junior college.*—Two years at the university level. At present there are two of these colleges in Puerto Rico—one public which is part of the University of Puerto Rico—the Humacao Regional College—and one private, the Puerto Rico Junior College at Río Piedras.

5. *University.*—Two- and four-year courses, professional, and postgraduate studies. At present there are four institutions of this type in Puerto Rico—the University of Puerto Rico with campuses at San Juan, Río Piedras, and Mayagüez, the Catholic University at Ponce, the Inter-American University with campuses at San Germán and Hato Rey, and the College of the Sacred Heart at Santurce (a woman's college).

Private schools at the elementary, junior, and senior levels are accredited by the Department of Education of Puerto Rico. Private universities or junior colleges are accredited by the Superior Educational Council of Puerto Rico which is the governing body of the University of Puerto Rico. The Secretary of Education is ex officio president of the council. The other six members are appointed by the Governor with the consent of the Puerto Rican Senate.

When control of education was relinquished by the Federal Government, it was vested in the Secretary of Education, appointed by the Governor. Local financing has been practically discontinued and the Commonwealth government has now assumed almost complete responsibility for financing schools.

District Organization and Administration

There are 77 local school districts in Puerto Rico.

The superintendent of schools.—Each district has a superintendent of schools appointed by the Secretary of Education. The superintendent represents the secretary in the district, therefore he is not in reality a local superintendent but an official of the Commonwealth.

The school director.—Each municipality has a school director appointed by the mayor. The school director is also the municipal treasurer and may perform certain other municipal duties. His principal job is not that of school director. The school director is not an important school official. The government of Puerto Rico provides a small trust fund which is allocated annually by the Department of Education to the municipalities. This trust fund is used for school supplies, minor repairs, and certain small pieces of equipment. The school director approves expenditures from this fund which must also be approved by the Secretary of Education. He signs the appointments of teachers. This is of no particular significance now because the top person on the candidates' list for each position must be appointed irrespective of political or group pressures.

The municipalities have no direct control over the public schools other than that indicated above. However, the municipalities do have the power to construct school buildings and to provide additional local revenue for other current expenses except that local funds may not be used to supplement buildings or provide additional local operating funds.

Major Aspects of Organization and Administration

The curriculum.—The curriculum and courses of study are determined and prescribed by the Secretary of Education and his assistants in the Department of Education. Superintendents, principals, and teachers play little or no part in planning and developing policies for determining the curriculum and courses of study. Those functions are performed almost exclusively by professional personnel in the Department of Education.

Textbooks.—The Secretary of Education selects all textbooks. The procedure is as follows when a new book is to be selected:

1. The head of the section in the Department of Education which is concerned with that subject studies the available texts for that subject and makes a recommendation to the textbook committee.
2. A textbook committee is appointed by the secretary. The present textbook committee is composed of the assistant secretary for the regular school program, the assistant secretary for adult education, the assistant secretary for special services, the director of vocational education and the director of production and acquisition of textbooks. The committee studies the recommendation

of the head of the section of the Department of Education concerned with the subject and makes a recommendation to the Secretary of Education who actually makes the selection.

Supervision.—The intent of supervision is to facilitate improvement in the instructional program of the schools. Many teachers, especially new teachers, need assistance in learning their work and in improving their teaching. This assistance should come through a good supervisory program. However, this program, as it operates in Puerto Rico, actually serves its proper functions only in part. While some valuable assistance is provided for many teachers, the department, because of the nature of its organization, has placed considerable emphasis on inspection. Many local school personnel look on certain representatives from the Department of Education as persons who come primarily to see whether the manuals and directives are being observed rather than as persons whose primary purpose is to help improve instruction. Thus many teachers and principals are as much or more concerned about conforming to directives as about improving their work. Thus, the present plan of supervision has both helped and hindered the educational program. What seems to be most needed is more emphasis on supervision in a constructive helpful sense. Less time should be devoted to inspection and checking on details of form and more on bona fide assistance to local systems and schools.

Personnel.—The Secretary of Education has the legal authority to appoint every employee in the public school system of Puerto Rico from the rank of janitor to that of undersecretary of education. It is, of course, impossible for the secretary to know personally and to evaluate every person employed in the public school system. So in practice the secretary and the top staff members of the Department of Education, as authorized by him, directly appoint all professional administrators, supervisors, and technicians of the rank of assistant principal and above. Subject to certain restrictions the superintendents appoint the teachers, the school director appoints the lunchroom employees and the mayors appoint the janitors. Classified secretarial and clerical personnel are appointed by superintendents or by the secretary and his assistants depending on the type of service to be rendered. All appointments not made directly by the secretary must be approved by him.

All teachers must hold certificates issued in accordance with the rules and regulations promulgated by the secretary and approved by the Governor. The requirements prescribed for regular certificates, while not as high as those required by some States of the United States, compare favorably with those of many States. If qualified teachers are not available, the secretary may issue provisional certificates in sufficient number to fill the vacancies.

The superintendent of schools is supposed to be responsible for the instructional program in his district. But he has no voice in the appointment of the principals or supervisors assigned to his district.

The school plant program.—Almost all school plants are constructed and equipped by the Commonwealth. Only a few municipalities have constructed buildings although all have the authority to do so. Funds to construct school buildings are provided by the legislature.

Three Commonwealth agencies are involved in the construction of school buildings—the school planning division of the Department of Education, the Commonwealth planning board and the department of public works. The planning division of the Department of Education makes studies of school plant needs and recommends the project that should be constructed annually. Those recommendations are then presented to the Commonwealth planning board. The recommendations are reviewed by the division along with other recommendations for public works from other agencies. The Commonwealth planning board prepares a list of approved public work projects which includes school buildings. The department of public works then constructs the approved buildings within the limits of funds provided by the legislature. The building plans are prepared by the Commonwealth planning board after consultation with the planning division of the Department of Education.

Transportation.—School transportation is a recent development in Puerto Rico. The general policy is to provide transportation for pupils who live more than 3 kilometers from school.

School lunch.—Puerto Rico has made great progress in developing its school lunch program despite the fact that school lunch facilities at many schools are quite limited. The Commonwealth provides a substantial amount of funds which, combined with Federal school lunch and school milk funds and surplus commodities, makes it possible to furnish daily lunches for approximately 45 percent of all pupils. The pupils are not charged for these lunches. In order for a child to eat in the lunchroom, an application must be approved. Applications are approved on the basis of need. Such factors as distance from school and economic condition of the parents are considered in determining need.

Finance.—Beginning in 1946, the Commonwealth assumed the responsibility for financing the public schools. Prior to that time the municipalities had certain responsibilities including that of repairing and maintaining buildings and providing the equipment. The municipalities may at the present time help to finance construction, provide equipment, and assist financially in certain other ways. Since the responsibility for financing the schools is centralized, the responsibility for preparation of the budget is, as would be expected, pretty well centralized in the Department of Education. The tentative budget prepared by the department in considerable detail must, of course, go to the bureau of the budget for changes. The Governor may in his discretion make further changes before he submits the budgets to the legislature where action is final, except for certain adjustments within the amount appropriated for designated purposes, that may be approved by the bureau of the budget.

Aside from the fact that salaries of teachers are low, the most serious limitations seem to involve funds for library books for schools, repairs and upkeep of buildings, equipment and certain types of supplies. Funds for buildings and other capital improvements, provided through a separate budget, have always lagged seriously behind the needs.

The reason for limited funds is understandable in the light of the present economic situation in Puerto Rico.

IV. SIGNIFICANT POLICIES IN EDUCATION

There have been significant changes during the last six decades in the public school system of Puerto Rico. Changes have occurred in the curriculum, in school services, in administrative policies, and in school organizations. Some of these changes have affected the system in a positive way, others adversely. A summary of some of these changes and their effect upon education follows:

Gradually a number of auxiliary services have been added to the school system with the idea of increasing the school holding power, improving attendance, contributing to the intellectual and physical development of students, and offering opportunities to keep and develop human resources. Among these services we may mention the following:

SCHOOL LUNCHROOM PROGRAM

This program functions as an educational agency. It aims to improve the dietary habits of the children and to provide part of their daily diet.

The total amount of resources available for this program in the 5-year period from 1960–61 to 1964–65 was as follows:

1960–61	$12, 578, 450
1961–62	14, 237, 298
1962–63	15, 143, 087
1963–64	17, 024, 155
1964–65	16, 995, 893

Federal funds have been a significant factor of financing this program. Of the resources reported, above Federal grants, both in money and in kind, accounted for the following percentages of the total in those years: 1960–61, 51.9 percent; 1961–62, 51.7 percent; 1962–63, 52.6 percent; 1963–64, 51.6 percent; 1964–65, 45.3 percent.

The average number of pupils who benefited daily from this program during 1960–61 to 1964–65 was as follows:

1960–61	238,104
1961–62	241,977
1962–63	245,122
1963–64	255,666
1964–65	270,049

These figures amounted to the following percentages of the total enrollment in public day schools during those five years: 1960–61, 41.2 percent; 1961–62, 41.0 percent; 1962–63, 41.0 percent; 1963–64, 42.1 percent; 1964–65, 43.6 percent.

In general, the lunchroom program has served a type of lunch which more than meets the requirements specified under the agreement with the Federal Government. It supplies almost two-thirds of the nourishment the child needs each day.

THE SCHOLARSHIP PROGRAM

Scholarships are granted to gifted students at all levels: elementary, junior high school, and senior high school levels. There is no limitation as to the number of scholarships to be granted if the candidates qualify. Additional resources for this program can be obtained from emergency funds. In this respect this program is unique. During the last 5 school years the number of students who benefited from this program and the amounts of funds available for it were as follows:

Year	Funds	Number of students who benefited
1960–61	$640,000	18,610
1961–62	686,000	20,180
1962–63	660,000	21,906
1963–64	825,000	16,978
1964–65	825,000	16,947

The number of students who benefited each year represented the following enrollment during these years: 1960–61, 3.2 percent; 1962–63, 3.4 percent; 1962–63, 3.7 percent; 1963–64, 2.8 percent; 1964–65, 2.7 percent. The scholarships amount to $40 per year in the case of elementary school students, to $50 per year in the case of junior high school students, and to $60 per year in the case of senior high school students.

At the present time the number of students who benefit from the program are distributed by school level to which they attend in the following manner: elementary level, 40 percent; junior high school level, 35 percent; and senior high school level, 25 percent. Sixty-five percent of the students benefiting from the program are from the urban zone, and the other 35 percent are from the rural zone.

THE TRANSPORTATION PROGRAM

Free transportation is given to students who live in the rural areas to attend schools in the urban zone or to attend schools located far from their homes. This measure increases the holding power of the schools and prevents dropouts.

In the last 5 school years the number of students receiving free transportation and the amounts of money spent for the program were as follows:

Year	Expenditures	Number of students transported
1960-61	$1,096,689	43,928
1961-62	1,328,877	51,016
1962-63	1,470,749	53,331
1963-64	1,586,744	56,560
1964-65	2,118,878	71,278

The number of students receiving free transportation during these 5 years represented the following percentages of the total public day school enrollment: 1960–61, 7.6 percent; 1961–62, 8.7 percent; 1962–63, 8.9 percent; 1963–64, 9.3 percent; 1964–65, 11.5 percent. The average yearly expenditure per pupil transported was $25 in 1960–61, amount which increased to $30 in 1964–65. Twenty percent of the pupils transported are elementary schoolchildren, 50 percent are from the junior high school, and the other 30 percent from the senior high school. Seventy percent of the students are transported from the rural zone to schools in the urban zone, and the other 30 percent are students from the rural zone who are transported to rural schools far from their homes.

Since the school year 1961–62 students from the metropolitan zone are paid half of their bus fare if they utilize the transportation services of the Metropolitan Bus Authority (government owned). This program benefits both public and private school students.

During the last 4 school years the amounts spent and the number of pupils who benefited from this new program were as follows:

Year	Expenditures	Pupils who benefited
1961-62	$65,000	15,400
1962-63	65,000	15,400
1963-64	115,000	19,749
1964-65	119,000	21,288

THE FOOTWEAR PROGRAM

In 1955 it was found out that 2.4 percent of the pupils in the urban zone and 22 percent in the rural went to school barefooted. Because of the psychological effects and the hygienic risks this problem presented, the legislature passed Act No. 66 to solve this situation at once "without waiting for the fruits of the economic improvement programs launched by the Commonwealth." The law created the footwear program. Students who lack means to purchase shoes because of orphanage, desertion, or circumstances such as unemployment, illness, or insufficient income of parents or guardians, are eligible for this service. The law demands that the amount of 50 cents be paid to the department of education for each pair of shoes given to a child.

During the last 5 school years the amounts spent and the number of pupils who benefited from this program were as follows:

Year	Expenditures	Pupils benefited
1960-61	$222,891	116,984
1961-62	279,758	113,719
1962-63	264,119	105,870
1963-64	252,142	122,103
1964-65	261,350	82,432

The number of pupils receiving the benefits of this program represented the following percentages of the total public day schools enrollment during these 5 years: 1960-61, 20.2 percent; 1961-62, 19.3 percent; 1962-63, 17.7 percent; 1963-64, 20.1 percent; 1964-65, 13.3 percent.

SCHOOL SOCIAL WORK

Social work started in the second unit schools in 1928 to help the children in the rural zone in their social and cultural development. The general objectives of the program at that time were to take care of the health conditions of the community and to develop good social habits in the children. To comply with these aims, social workers engaged in activities to improve health and recreation and social life in the community. The number of social workers has increased gradually. In 1928 there were only 5 social workers, in 1964-65 there were 177. Their services have been extended to the urban zone and their work has become more definite since additional personnel has been appointed for some of the services (health educators and counselors).

At present the main objective of school social workers is to "help children in the elementary urban and rural schools adapt themselves to the school." To achieve this aim social workers use the techniques of case work, and group and community organization. They try to help students adjust to school environment. They make use of school, home and community resources for said adjustment.

THE HEALTH PROGRAM

One of the immediate purposes of the Puerto Rican school system is to improve the physical, mental, and spiritual health of its students. In order to achieve this purpose, a school program was organized with the following objectives:

a. To preserve and improve the student's health.

b. To develop appropriate habits and attitudes of the student to preserve his health.

c. To promote the physical, emotional and social environment which would facilitate the integral development of the pupil.

d. To promote understanding and development of habits and attitudes among the parents and adults in order to assure the improvement of their own health and of that of the community.

e. To use adequately the services offered by the community.[128]

This program attempts to satisfy three basic necessities of the children's health: a wholesome school environment which, on account of its material facilities and emotional climate, will lead to good health; medical services that will keep children healthy and help correct those physical defects and health deviations (abnormalities) which may occur; and practice in health habits. The health program identifies itself primarily with three great areas: school environment, medical services, and health education. It is the teacher's responsibility to foster the development of these aspects of health.

In order to supervise the health program at the school or district level, health educators have been appointed. They study the health problems in the community, participate in its health improvement programs, help in the planning of the local health program, explain the health program to the community, prepare, select and distribute the material and guide the personnel in the continued periodic evaluation of the health program.

At the present time there are 68 health educators' positions in the department of education.

THE GUIDANCE SERVICE

The guidance service aims to help students in the secondary schools formulate their educational and vocational plans and solve their problems. Students are helped to discover their abilities and interests, they are offered information about educational and employment opportunities and counseled in the selection of a career and in the solution of their personal problems.

The program consists of five services:

(*a*) The individual inventory service which tries to help the students to appraise their interests, abilities and experiences before making choices.

(*b*) The informational service which secures and makes available to students information about occupational fields and educational opportunities.

(*c*) The counseling service in which the counselor and the counselee get together to interpret the data concerning the individual and his problems.

(*d*) The placement service, given to high school students to help them make the transition from one school to another or from school to apprenticeship or employment.

(*e*) The followup service, through which the continuity of the counseling process is assured.

Superintendents, principals, teachers and counselors are in charge of the guidance program. Counselors have the following basic duties:

(*a*) To provide counseling to students.

(*b*) To serve as a resource person [adviser] in the training of teachers in the use of techniques for understanding students.

(*c*) To participate in planning, organizing, developing and interpreting studies and surveys that would lead to curriculum improvement.

This program was started in 1937 with six counselors. In 1964–65 there were 216 counselors. The increase in the number of counselors is not in proportion to growth in high school enrollment.

VOCATIONAL REHABILITATION

Vocational rehabilitation provides the services necessary to render a disabled person employable. It functions under the Commonwealth board for vocational education. Any disabled civilian 16 years of age or over is eligible for rehabilitation services if he has a disability, no matter how it was incurred, which constitutes an employment handicap and which is not of such nature as to render any type of employment absolutely impossible. The services include medical examination, counseling, physical restoration, vocational training, necessary artificial appliances and placement, and maintenance during training if necessary. Special services are offered for the blind and persons with arrested pulmonary tuberculosis. During the last 5 fiscal years the number of persons who benefited from this program and the amounts of funds available for it were as follows:

Year	Expenditures	Number of beneficiaries
1960-61	$1,292,337	9,527
1961-62	1,448,491	8,780
1962-63	1,697,190	10,226
1963-64	1,966,828	9,793
1964-65	2,417,631	10,200

This is another of the programs under the Department of Education for which the Federal Government provides a very substantial part of its costs. Of the amounts of funds which the program had available during those 5 years, Federal appropriations accounted for the following percentages of the total funds: 1960–61, 66.3 percent; 1961–62, 70.1 percent; 1962–63, 72.1 percent; 1963–64, 70.0 percent; 1964–65, 70.4 percent.

During the fiscal year 1965–66 the program expects to count on funds amounting to $3,717,745 of which $2,695,365 (72.5 percent of the total) are Federal funds. The number of persons to benefit from the services provided by the program is expected to increase to 22,265 in contrast to the 10,200 that received services during 1964–65.

DEMOCRATIC SUPERVISION

In 1930–31 a new system of supervision was introduced. Emphasis was shifted from inspection to diagnosis and remedial suggestions. Supervision under the new plan was conceived as a cooperative enterprise directed at the improvement of teaching and of the teaching act. Great importance was attached to the human element in the relations between supervisors and teachers.

THE ESTABLISHMENT OF THE SECOND-UNIT RURAL SCHOOLS

The second-unit rural schools were established to increase the holding power of the rural schools and to improve their conditions. These schools were consolidated rural schools (grades 4 to 8) of a vocational type aimed at fitting the students for efficient lives as producers and consumers of goods. They include besides academic teachers, teachers of agriculture, home economics, manual training, and industrial arts, and social workers.

During the school year 1964–65 there was a total of 190 second-unit rural schools in the educational system. One hundred and seventy-eight of them had programs of study for children from the 1st to 9th grades, and three others offered the complete program of studies from 1st to 12th grades. There were nine second-unit rural schools which offered programs of studies of 8 years or less. This type of organization opened opportunities of longer schooling and of a more diversified kind to the rural population of Puerto Rico. It opened the way to vocational training, to better job opportunities for rural students, for better community services such as social work, health centers, home improvements, better nutrition, knowledge and habits, and an uplift in values, aspirations, and expectations of the rural population.

THE 6–3–3 ORGANIZATION OF THE ELEMENTARY AND SECONDARY SCHOOLS

In 1942–43 a change in the general organization of the school system was effected. A 6-year elementary school was substituted for the 8-year plan, a 3-year junior high school and a 3-year senior high school took the place of the upper elementary grades (7th, 8th) and the traditional 4-year high school.

The junior high school was organized in order to provide an educational division especially centered on the needs and problems of the adolescent child. The work in this school was conceived to be of an exploratory nature designed to teach the child to make vital choices as to his field of future study and vocations.

PROMOTION POLICIES

One of the norms adopted in 1954 in relation to promotions established as one of the basic principles that no student should be failed from first through the third grade. This principle did not relieve the teacher of the responsibility of teaching reading and writing. Many students were promoted, though, without having acquired the preparation needed to work in the next grade.

CHANGES IN CURRICULUM

a. *Introduction of the look-and-say method to teach reading.*—A misinterpretation of the look-and-see method led to the elimination of phonics. This left students without a suitable technique to recognize new words. Thus many students became poor readers.

b. *Incidental teaching of grammar.*—The belief that grammar is not learned by learning rules led to a policy of teaching grammar incidentally. With this procedure pupils failed to learn the abilities and skills necessary for correct usage that are developed through a functional, systematic approach to the teaching of grammar.

c. *Introduction of social studies.*—Prior to 1930, history, geography, and civics were taught as separate subjects. When these three subjects were fused, the content of each subject was reduced. Skills and abilities related to geography were not emphasized. The knowledge of the children in these fields was limited.

d. *Introduction of the study of community problems.*—A further fusion was brought about when the study of community problems was introduced. The bases of this new subject were the everyday life problems of the individual communities in Puerto Rico. It aimed to train the child to be conscious of, to analyze, and if possible, to solve those problems that affect him as an individual or his community as a whole. Science, social studies, and health education were supposed to form an integral part of the study. But in practice this was not so. Thus children failed to learn science, history, and geography.

V. Trends in Education

It is quite difficult to identify trends in education under the circumstances described by this document. What may seem a trend may be just one more passing preference of a particular administration in charge of education at the time. It may be that what looks like a trend is "going to no particular place, going for the joy of locomotion." [129]

At any rate these seem to be some of the trends in education which possibly may have some significance in the future:

DECENTRALIZATION OF THE SCHOOL SYSTEM

The island has been divided into six zones for purposes of supervision, technical assistance and to facilitate the distribution of books, reading materials, and supplies. Although still not adequately defined as to functions of local, regional and central officers this is a move which, if well executed, may improve the quality of the work done in the schoolroom.

PLANNING

A new office of planning and research has been created. Well devised and executed plans—both physical and academic—tend to improve school functioning.

EXPERIMENTATION AND RESEARCH

There is discernible a greater emphasis in experimentation and research. Although it is sociologically and anthropologically oriented, as far as methodology and techniques are concerned, it is a step in the right direction.

PRESCHOOL EDUCATION—KINDERGARTENS

Kindergartens have not been a permanent and formal program of the public educational system of Puerto Rico although some institutions of this type were sporadically established as far back as the school year 1901–2. Thus, according to the official reports of the Department of Education in 1901–2 there were 351 children in public kindergartens, in 1902–3 there were 604 children, in 1903–4 there were only 195 children, and between 1908–9 and 1911–12 these figures ranged from a low of 230 children to a high of 395. From 1912 on there is no information in the official reports to indicate that this program was further continued. It was not until 1960–61 that the public school system formally initiated this program in 6 of its schools with an enrollment of 288 children. By the school year 1964–65 the program had been extended to 80 schools which had a total of 83 groups organized with an enrollment of 4,345 children. Private schools have had kindergartens as a regular feature of their school organization. In fact, some of the private schools initiate their development with the establishment of a kindergarten and then move on providing facilities for the other grades as these initial groups move to first grade, second grade, and so on. By 1950–51 accredited private schools were enrolling 2,222 children in their kindergartens. This figure represented a proportion equivalent to 49.3 percent of the first grade enrollment in private schools in the school year 1951–52. In 1959–60 kindergarten enrollment in these schools was 4,854 pupils which represented a projection of 69.9 percent of their first grade enrollment in 1960–61.

In the school year 1964–65 kindergarten enrollment in private accredited schools was 5,398 pupils and in nonaccredited, 1,566.

In 1960–61 public and private kindergarten enrollment represented 8.7 percent (5,759 pupils) of the 5-year-olds in the population, and in 1964–65 this figure had increased to 16.1 percent (11,309 pupils). It is expected that in the current school year (1965–66) this percentage may fluctuate between 16.8 and 18.3 of the 5-year-olds in the population or between 12,086 and 13,165 pupils enrolled in both, public and private kindergartens. Private kindergartens include both, those of accredited and nonaccredited private schools.

PROGRAMS FOR GIFTED AND RETARDED PUPILS

a. *Testing program for pupils with extraordinary talent.*—This program of the Department of Education is directed to find out the students of the public schools with extraordinary academic talent and to try to retain them in the school until they complete the secondary school education in order that they will be able to enter the higher level institutions. In order to look for these talented students, tests are given to students of the 1st, 4th, 7th, 9th, and 11th grades. In 1963–64, a total of 520,957 students were given such tests. This number is about two and one-half times that in 1960–61, when 214,346 students were given such tests. During 1965–66, the department has planned to extend giving tests to all the pupils so that from the very early stage of the educational achievement, the talented students can be guided properly. The department has been appropriated $60,000 for this program during 1965–66. The same amount was available during 1963–64 fiscal year.

b. *Scholarships for talented pupils.*—The law 55 of April 1949 (amended by the law 64 of June 1956) established the program of scholarships for the talented students who lack sufficient financial resources to continue studies in the school. During 1963–64 some 16,978 students (2.78 percent of the total public school enrollment) were given scholarships under this program amounting to a total of $806,330. Of these 16,978 scholarships, 13,607 were renewals and the rest, 3,371, were new. During 1963–64 about the same number of students were given scholarships and in 1965–66 it expected that 17,500 students will be benefited using about the same amount.

c. *Program for retarded pupils.*—The Department of Education has developed since 1958–59 a program to attend the special needs of pupils who are retarded. The program was initiated with one group of 18 pupils in Bayamón District. Today, in 1965–66, there are 90 groups with approximately 1,500 such pupils. Separate groups are created so as not to hinder the progress of the normal (average) pupils.

The program, in all of its four phases, is being carried out through the regional directors. These phases are: selection and preparation of teachers, training of other participating personnel, collaboration with the other agencies working with retarded children and the expansion of the program. The teachers and other personnel are given special classes and are trained by specialists in the field. Lectures and seminars are also arranged.

A coordinating plan with the working program of other agencies has been prepared to be submitted to the U.S. Department of Health, Education, and Welfare for the financial appropriation. It is hoped that one center of evaluation and vocational rehabilitation will be created in each school region except in the region of San Juan, where there will be two such centers.

A plan of expansion of this program for the next 5 years is being considered through which it is expected to create 35 new groups of such children every year. The following relation indicates the yearly enrollment of the retarded children, since the program was established:

Year	Number of group	Enrollment
1958-59	1	18
1959-60	3	54
1960-61	8	144
1961-62	17	306
1962-63	31	558
1963-64	47	846
1964-65	72	1,250
1965-66	90	[1] 1,500

[1] Approximate.

It is estimated that there are around 12,000 elementary school students with varying degree of mental retardation.

d. *Experimental project of high schools.*—The Department of Education and the University of Puerto Rico initiated in 1961–62 a project dealing with a pedagogic experiment with the help of the funds made available by the Ford Foundation for "Adelanto de la Educación." The initial donation was of $650,000 for the first 3 years of the project. The project consists in offering university level courses of the first year and a half, particularly of general studies, during the 4 years of high school (9th–12th grades) in addition to the regular high school courses of these years. The program started in 1961–62 with 210 students; in 1965–66 there are 12 schools participating with a total enrollment of 1,833.

The following shows the growth of this program:

Year	Number of schools participating	Enrollment
1961-62	6	210
1962-63	7	719
1963-64	9	1,329
1964-65	9	1,623
1965-66	12	1,833

GUIDANCE

As is to be expected, trends like the ones described above will bring a reinforcement of measurement, guidance, and orientation procedures. The opening of new jobs and professions, at present nonexistent, and the rapid pace at which others become obsolete, will increase the need for vocational guidance and orientation in high school and colleges.

CURRICULUM

The elementary and secondary school curriculum—principally with gifted groups—is being reorganized giving it a more "general studies" flavor. Science and mathematics are receiving new impetus according to new practices underway in most of the progressive school systems of the States.

RURAL SCHOOL SUPERVISION

There is a trend to improve rural school supervision.

PARENT-TEACHERS' COUNCILS

The parent-teachers' associations have generally failed in their aim of interpreting the schools to the community and in strengthening the school-community relationship. New organizations are being developed, through parent-teachers' councils, which may accomplish what the earlier ones did not.

DOUBLE ENROLLMENT AND INTERLOCKING

There is a concerted effort to eliminate as soon as possible the double enrollment and interlocking schemes of school organization.

COMMUNITY EDUCATION

There is the purpose of extending community education to the urban zone.

RADIO AND TELEVISION

Greater emphasis is to be placed on formal educational programs through radio and television.

COMMUNITY COLLEGES

At the university level there is a strong trend to develop more and more diversified community colleges or junior colleges.

GRADUATE WORK AT THE UNIVERSITY

There is a strong movement to develop graduate work at the university.

VI. Concluding Remarks

The government of Puerto Rico has generously supported education as one of the main sources of strength for whatever plan of development is put in action. The people of Puerto Rico have a strong faith in education. It is even a tragic faith since it brings with it the belief, among the masses, that almost any problem—poverty, health, population control, low salaries, and even the attainment of any high-paying job—can be solved when a good education is acquired. This is, really, not far from the truth, but reaching that level of education which makes possible the fulfillment of such expectations is at times frustrating.

Governor Muñoz Marín reaffirmed the faith in education when he said that "there can be no greater emergency than that of providing education for those whom nature has endowed with power of mind and spirit," adding, "I earnestly believe that except for the most pressing human wants, education will constitute our supreme consumption * * *"

The financial support that the taxpayer has been willing to offer the educational process attests to the faith of the people of the island in the power of knowledge put to constructive use for uplifting the people and improving civilization.

If we were to single out the most persistent problems with which education has struggled in Puerto Rico, we would mention, first, the lack of a coherent, reasonable and unifying philosophy of education; second, the language issues—that is, the constant shifts in the policies and programs for the teaching of English; and third, the population explosion and its repercussions in school enrollments at all levels of the educational system.

A philosophy of education is necessary to provide the unifying framework for the Puerto Rican school system. In the past there has been confusion between a philosophy of education and a concern with procedure; this confusion can be seen in the continuous alteration of the educational process in Puerto Rico. A language policy and Americanization have often substituted for a philosophy. Since the school is an agent of change in society, a philosophy of education should reflect the Puerto Rican culture in which it is to operate.

The vernacular of the people of Puerto Rico has been, and still is, Spanish. For more than 400 years it has been used as a strong, unifying instrument of the people of the island. The situation in Puerto Rico, as far as language is concerned, is different from the one found in the Philippines and in Hawaii where there was no lingua-franca. For over 67 years now the idea of making the people of Puerto Rico bilingual has plagued educational policies and given ground for political controversies.

There have been in operation at least some seven different policies for the teaching of English in Puerto Rico since 1900, as are described from page 156 to page 180 of this report. There is no doubt that there is great need to teach and learn English in the schools of Puerto Rico.

Nor is there any doubt that the teaching of English in Puerto Rico should be strengthened by a clarification of educational policies, by the improvement of methods and techniques, by the utilization of better-trained teachers, by supplementing teaching with programs that avail themselves of new educational media such as audiovisual aids, radio, television, movies, among other effective means of communication.

According to the official projections, the total population of Puerto Rico will increase from 2,358,000 inhabitants on July 1, 1960, to 3,562,563 inhabitants on July 1, 1979. Population estimates, according to the present tendency of zero net migration, will pass the 4 million mark.

Based on this population projection, the official projection of school enrollment (CSE–E–6) for grades 1 to 12 in 1979–80 is expected to be over 1 million (1,042,363), the enrollment in 1963–64 being 669,000. (The total enrollment compared to the population of 6 to 18 years of age on July 1979 will be equivalent to 94 percent compared to 83 percent in 1962.) Of this total enrollment of over 1 million, the enrollment at the elementary level (grades 1 to 6) is expected to be 628,328; at the junior high school (grades 7–9), 245,168; and at the senior high (grades 10–12), 168,867.

The projection assumes that in 1979–80 the school system will succeed in retaining in the 12th grade 50 students of the 100 enrolled in the 1st grade 11 years ago. In 1962–63 this number was only 25.

It is expected that of the total enrollment in 1979–80, 946,500 will be enrolled in the public day schools and the remaining 95,900 in private accredited schools.

At the university level, the freshmen enrollment in the fall of 1979 is expected to be over 22,000 and the total enrollment to be about 83,000 students. The total enrollment would represent 32.4 percent of the population of ages 19–22 compared to 19.3 percent in 1962. Of the total enrollment about 65,000 will be enrolled in the state university and about 18,000 in the private institutions.

The number of elementary- and secondary-school teachers required for the increase in the enrollment in the public and private accredited schools during 1965–80 is expected to be between 9,900 and 11,500 (not counting those required for replacement due to death, resignation, and such other causes). At the university level it is estimated that the number of professors needed for the additional students enrolled during 1965–80 may be between 3,300 and 4,200 (not counting replacements).

The public school system of Puerto Rico has had extraordinary quantitative development. The illiteracy rate which was close to 80 percent in 1900 had been reduced to 16.6 percent according to the 1960 census, and will drop to 13.8 percent in 1964, if our statistical estimates turn out to be correct. There were less than 582 teachers in 1900 and there are now 16,749. In 1900, some 24,392 students were enrolled in the schools. The school enrollment during the year 1964–65 was 618,266 in primary and secondary schools.

The budget approved for the Department of Education for the fiscal year 1965–66 amounts to $130,648,900 or 28.7 percent of the operating budget of the government of Puerto Rico. The budget for the University of Puerto Rico amounts to $24,869,650 equivalent to

5.5 percent of the total operating budget of the government of Puerto Rico.

During the academic year 1964–65, 22,940 students received their high school diplomas.

The University of Puerto Rico has doubled its enrollment every 10 years during the last three decades. In 1963–64 there were 22,959 students at the university. The institution graduated 10,304 students during the decade 1940–49 and 21,355 during the decade 1950–59. From 1939–40 to 1962–63 the university has conferred a total of 44,880 degrees, certificates, and diplomas. It is expected that during the period 1960–69 it may graduate close to 40,000 students.

There are 1,932 members in the university faculty. The institution has granted over 1,655 leaves of absence for professors for study purposes at a total cost of over $5,651,000. The university administers the largest scholarship program on the island whose main feature is that economic shortcomings should not deprive able students from acquiring a university education. The schoolroom facilities have almost doubled during the last 10 years.

This tremendous explosion in school enrollment at all levels of the educational system has brought with it difficulties in administration, finances, curriculum, and programs with which educators and administrators are wrestling. From this rapid quantitative development came the double enrollment plan and the interlocking scheme, providing an incomplete ration of schooling for the children. This plan is also a contributing factor to the high dropout rates of students and teachers. In other words, quality was sacrificed for a while for the purpose of giving an opportunity of education to the largest number possible. From this point of view there was no other alternative. It is better to have half a loaf than none at all.

Historically the system of public education in Puerto Rico has suffered from the attempt to copy the public school system of the United States, at times without any adaptation to a different milieu, to a different culture, and different socioeconomic conditions. Methods, techniques, materials of instruction (especially textbooks), were adopted without regard to adaptability to varying conditions.

The policy of the teaching of English has constituted the backbone and the bone of contention of the whole educational enterprise. A pedagogical problem was turned into a political football. The long emotional and unreasonable debate as to whether English or Spanish should constitute the medium of instruction returned to a pedagogical and technical approach when Commissioners José Padín and Mariano Villaronga adopted the policy that Spanish be used as the medium of instruction and English be taught as a preferred second language. A more scientific linguistic program has been tried ever since and revised as new knowledge and experience are assimilated. The Villaronga policy and program on the teaching of English based on the science of linguistics gave a more scientific turn to the whole problem.

The program of vocational education has added dignity and value to skilled and unskilled work. The Latin tradition placed emphasis on the classical professions: law, medicine, the clergy and of late, perhaps, engineering. Vocational education, the new industrial development and the increase in the power of business and commerce have helped change the concept of the importance of any job well done. There is no doubt that this has helped to develop a new middle class.

Each new generation in Puerto Rico demands more education. In 1950, about 5.8 percent of our older generation (ages 65–74) had 5 to 7 years of schooling; in 1960, about 8.8 percent had 5 to 7 years of school. In 1950, 14.6 percent of the middle generation (ages 45–54) had 5 to 7 years of school; this grew to 17.95 percent 10 years later. In 1950, a total of 20.2 percent of the younger generation (ages 25–34) had from 5 to 7 years of school. Ten years later this dropped to 18.3 percent because most of the younger group continued further with their education than before. It can be said that 12 years of schooling is as normal for our young age group in 1960 as 5 to 7 years is for the older age group. In college, in the 1960 comparison, one notes that only 1.29 percent of the older age group had finished 4 years of university schooling. This percentage jumped to 2.66 percent for those in the age 45–54 bracket and up to 5.24 percent for the younger group. This is a clear reflection of the increased educational opportunities being provided to each generation of Puerto Ricans.

Also interesting to note are the changes in the way that Puerto Ricans make a living. In 1950, only 4.9 percent of our workers were in the professional and semiprofessional class. By 1964 this figure had increased to 7.6 percent. Office workers and salesmen, who occupied only 10 percent of our work force in 1950, increased to 15.3 percent by 1964. On the other hand, farm workers, who comprised 30.9 percent of the total in 1950 totaled only 15.3 percent in 1964—less than half of the previous total. The drift away from agricultural work and towards manufacturing or skilled, white-collar employment has been dramatic in recent years.

Another extremely vital area for planners to consider is the dropout rate. For every 100 children who entered first grade back in 1937, only 35 reached the sixth grade in 1942. But for every 100 who entered in 1958, about 72 students were still in school in 1964. This is a tremendous improvement. However, it is a cause of concern that this

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percentage has not improved at all in the last 5 years. To reach a standstill at this point is dangerous.

The figures for first through ninth grade show that for every 100 students who entered school in 1937, only 23 were studying 9 years later. In 1964, 50 students were still left of each 100 who started in 1955. The dropout rate for the 1st to the 12th grades shows that only 12 of each 100 students who entered school in 1937 were still studying in 1948; but over 25 of each 100 students who entered in 1952 were still studying during 1964. Thus, despite a considerable improvement, 75 of every 100 children who entered school in 1952 are no longer in school; and at least 50 of these children never got to high school.

Several new services have been added to the school system of Puerto Rico which are of significance in bridging the gap between quantity and quality in education, such as:

(*a*) Educational radio and television.

(*b*) A strong and efficient lunchroom program.

(*c*) A badly needed system of transportation of students.

(*d*) Programs of orientation and guidance.

(*e*) Social work services.

(*f*) Different schemes of library services.

(*g*) An editorial and printing establishment.

(*h*) School papers.

(*i*) A shoe program by which shoeless students may get a pair of shoes for only 50 cents.

(*j*) A strong and laudable scholarship program which extends from the primary, through the high school, and to the university at both undergraduate and graduate levels.

(*k*) A salary scale which is uniform for those who have equal training and experience irrespective of place of work—rural or urban, elementary or high school.

(*l*) First steps towards decentralizing the highly centralized school system by dividing the island into six regions for purposes of supervision and to provide in each geographic area the technical, professional and teaching facilities formerly available only when received from the central offices at the Department of Education.

(*m*) New plans for kindergarten education which are gradually being developed and put into action.

(*n*) New facilities for talented and retarded pupils.

(*o*) The development of what has been called "exemplary schools," which have received unusual emphasis during the last 5 years.

(*p*) The intensified supervision of rural schools.

(*q*) Plans, seminars and work shops for curriculum revisions.

At the university level, a commission of educators is intensively working on the study of a new law to reform the university structure. This commission was jointly appointed, on mandate of both Houses, by the President of the Senate and the Speaker of the House of Representatives. Once the report is submitted to the legislature it will be taken up to draw a new university law.

Puerto Rico has gone through a peaceful revolution in politics, in socioeconomic conditions, in its relations with the United States, and in many cultural aspects. Education, somehow, has lagged in contrast to the rapid pace of other institutions. There has been significant educational progress, but not in proportion to the economic effort of the government of Puerto Rico or in keeping with the needs, aspirations, and expectations of the people of the Commonwealth. With few exceptions, notably during the administration of Padín and Villaronga, the policies adopted by the commissioners of education have kept Puerto Rico, its life, its culture, its values and its purpose, practically out of its school system. For decades there was established a shortsighted policy of Americanization, "the spread and triumph of American standards of thought and action" without due consideration to language, religion, manners, customs, attitudes and ideals of the people upon whom the Americanization process is applied.

AN OLD QUESTION BEGGING FOR AN ANSWER: WHERE ARE WE GOING?

In the process of acculturation, in the search for the definition of personality and attainment of security, Puerto Ricans should not allow mere drifting, as a policy, to drag them to solutions.. There has been a history of ambivalence, insecurity, clashes of culture, misunderstanding of political relations between United States policy and insular orientation. Both countries have entered new ways of relationship. But still in the process of acculturation, the aims and purposes are not clear enough to help develop an adequate philosophy of education to guide programs and school activities. Part of the truth is that we have not yet got enough understanding of our changing processes to set sound purposes. Some still attach too much value to outmoded and obsolete cultural patterns; patterns which would have changed irrespective of our political and cultural ties with the United States. Others, without any sense of what is really involved, would like to wipe out all our cultural values and replace them for all that sounds American to them. These divergent points of view make the task of education much more meaningful and challenging, as well as more purposeful and urgent. There could be conscious planning of education, identification of values, of social processes, of government policy as well as of the economic goals and orientation. Puerto Ricans should not isolate themselves in a "pure" culture. There has never been one, except for some few isolated tribes, and there cannot be one in this fast moving world of communication and transportation. Neither should the Puerto Rican, bewildered by American power, vigor and aggressiveness, try to discard all his heritage and substitute what is of value in his culture for anything that comes from the States.

The aim of most leaders during the last decades was to free political power from economic power and control. There may be still time to plan education and the orientation of other social institutions and agencies, which are also educational, to prevent the new economic forces at work in our communities not only from controlling political power again, but from turning into a powerful factor affecting adversely our culture, our customs, our family life and those desirable values and characteristics which have always been part of the most cherished way of life of the Puerto Ricans. There should be a purposeful effort to avoid the risk of having that weakening process realized by the forces of economics, by the power of advertisement, and the desire of the people for material possessions, the longing for comfort, the undue attachment to symbols of social status, and the push—at times exaggerated—to fulfill aspirations, individual as well as collectively, which are far beyond the economic potential, and the intellectual ability needed to attain them. The people of Puerto Rico may do well to strengthen the purpose of economic development side by side with educational and cultural development. People need to live well, but they also need to add quality and meaning to their lives.

The persistent question asked by Dr. José Padín in March 1931, still is begging for an answer: where are we going? At this crucial time in our political and cultural history, I must say with Dr. Padín. "I don't know * * *," and the people of Puerto Rico have not yet had a chance to express where they want to go. The majority of the voters have endorsed the Commonwealth status, but there has not been a plebiscite that would allow people to express their choice of a final political solution. The vote for the Commonwealth may be principally a vote for a socioeconomic program, not necessarily a vote for a final political solution according to the principle of "free determination," although it is generally interpreted as a vote for Commonwealth.

The establishment of the commonwealth form of government certainly is moving towards a goal; a terminal station has been building. But even that is no clear port of entry. If Congress offers the opportunity for public expression and assumes the responsibility of steering the course for the attainment of the final solution preferred by the majority of the American citizens who live in Puerto Rico, then this century-old drifting will set the scene for a clear philosophy of education, for the formulation of a program which will put people at ease in their quest for identity, for values, for cultural expression and fulfillment.

The school system has had certain goals, a number of objectives, and some well-expressed principles, workable in the development of a decent, honorable, respectable and alert human being. But these are goals which can be applicable in a limited way while we move ahead; no philosophy of education can be formulated unless it is known where we, as a people, are going.

Dr. Padín's words, expressed in 1931, still ring in our ears:

> Now, I may be forgiven for asserting that education is the basic remedy for our ills. But the uncertainty with regard to the future breeds confusion. We can neither set up clear goals to attain, nor move towards them with assurance and singleness of purpose. Our aims are challenged, our efforts neutralized. The people's faith in the school system is being slowly undermined * * * This complicates the process of preparation and lengthens it immeasurably * * * I fear that unless we select a port of destination soon and set sail for it we are going to be wrecked by the menacing winds that are beginning to blow.[130]

The urgency of this plea for definite action is better understood when we add that it has become true, as recent studies have shown, that parents and teachers, teachers who work in the schools, have been losing faith in their public school system, that there is growing restlessness among our youth, that political unrest in the Caribbean and elsewhere is adding elements of distrust of the democratic procedures. The means of communication are carrying information and a knowledge of other ways of life to all places; the revolution caused by inexpensive transistor radios has incalculable repercussions. People are on the move; people's growing expectations need reasonable fulfillment, or frustration will lead to bitterness. Developments in Puerto Rico have been peaceful, enlightened, productive. For Operation Serenity to be with us we need to know soon where we are going and harness the school to the service of the choices of the people clearly expressed and equally respected if expressed with the moral strength that offers a free, confusionless, democratic process of free determination. Not until then can public servants help steer the course of action, firmly and unhesitatingly, towards the fulfillment of well defined policies that are in harmony with a well-known philosophy, and a sound and healthy way of life towards which the people of Puerto Rich have determined to move.

This is the unmistakable task of the United States-Puerto Rico Commission on the Status of Puerto Rico.

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VIII. STATISTICAL DATA

TABLE 1.—*Official projection of total population by age groups for Puerto Rico—Years 1965, 1970, 1975, and 1980*

Age groups	1965	1970	1975	1980
0–4	399, 387	452, 217	495, 476	542, 350
5–9	344, 256	387, 402	440, 526	488, 716
10–14	321, 068	336, 058	379, 168	435, 828
15–19	309, 081	305, 354	320, 304	370, 496
20–24	229, 879	286, 592	282, 905	307, 982
25–29	157, 474	211, 023	267, 358	272, 259
30–34	124, 967	142, 781	195, 832	258, 246
35–39	121, 465	118, 547	136, 158	190, 419
40–44	125, 517	115, 535	112, 722	132, 144
45–49	101, 511	118, 163	108, 424	108, 040
50–54	100, 662	96, 244	112, 460	104, 109
55–59	71, 255	95, 609	91, 454	107, 298
60–64	60, 662	65, 545	88, 586	85, 429
65–69	54, 522	57, 921	62, 207	80, 257
70–74	41, 281	47, 693	50, 435	52, 333
75+	48, 541	60, 189	73, 848	87, 489
Total	2, 611, 528	2, 896, 873	3, 217, 863	3, 623, 395

Source of information: Department of Health and Biostatistic Division of the School of Medicine of Puerto Rico.

TABLE 2.—*Total population projection by age groups with zero net migration for Puerto Rico in the years 1965, 1970, 1975, and 1980*

Age groups	1965	1970	1975	1980
0–4	411, 792	489, 546	557, 077	604, 209
5–9	351, 036	408, 756	486, 676	554, 559
10–14	326, 483	350, 038	407, 685	485, 474
15–19	319, 951	325, 238	348, 721	406, 149
20–24	245, 214	317, 839	323, 106	346, 436
25–29	170, 284	243, 316	315, 444	320, 694
30–34	134, 867	168, 664	241, 009	312, 468
35–39	125, 110	133, 181	166, 569	237, 979
40–44	128, 577	123, 203	131, 214	164, 135
45–49	105, 026	125, 846	120, 614	128, 479
50–54	102, 317	101, 864	122, 123	117, 034
55–59	71, 835	97, 964	97, 611	116, 932
60–64	61, 642	67, 400	92, 114	91, 884
65–69	52, 852	56, 591	61, 675	82, 294
70–74	42, 376	47, 646	50, 702	52, 613
75+	48, 256	60, 344	73, 531	87, 243
Total	2, 697, 618	3, 117, 436	3, 595, 871	4, 108, 582

Source of information: Health Department and Biostatistics Division of the School of Medicine of Puerto Rico.

TABLE 3.—*Total population of Puerto Rico by age groups for persons in the age group 6–22 years old in the population (in number and as percent of the total population) actual figures for the years 1899 to 1962 and projections for the years 1964, 1969, 1974, and 1979*

Year (date)	Total population	Population 6-12 years of age		Population 13-15 years of age		Population 16-18 years of age		Population 6-18 years of age		Population 19-22 years of age	
		Number of persons	Percent of the total	Number of persons	Percent of the total	Number of persons	Percent of the total	Number of persons	Percent of the total	Number of persons	Percent of the total
1899 (Nov. 10)	953, 243	189, 459	19. 88	67, 906	7. 12	55, 889	5. 86	313, 254	32. 86	71, 715	7. 52
1910 (Apr. 15)	1, 118, 012	206, 069	18. 43	83, 821	7. 50	65, 123	5. 82	355, 013	31. 75	87, 863	7. 86
1920 (Jan. 1)	1, 299, 809	257, 563	19. 82	94, 058	7. 24	74, 000	5. 69	425, 621	32. 75	102, 368	7. 88
1930 (Apr. 1)	1, 543, 913	297, 670	19. 28	116, 466	7. 54	109, 628	7. 10	523, 764	33. 92	126, 832	8. 21
1940 (Apr. 1)	1, 869, 255	334, 887	17. 92	131, 589	7. 04	120, 711	6. 46	587, 187	31. 42	165, 025	8. 83
1950 (July 1)	2, 218, 000	421, 220	18. 99	150, 732	6. 80	131, 851	5. 94	703, 803	31. 73	161, 124	7. 26
1951 (July 1)	2, 224, 000	423, 789	19. 06	153, 160	6. 89	133, 005	5. 98	709, 954	31. 93	159, 603	7. 18
1952 (July 1)	2, 202, 000	420, 951	19. 12	153, 600	6. 97	132, 487	6. 02	707, 038	32. 11	156, 212	7. 09
1953 (July 1)	2, 182, 000	418, 469	19. 18	154, 152	7. 06	132, 084	6. 05	704, 705	32. 29	153, 050	7. 01
1954 (July 1)	2, 195, 000	422, 241	19. 24	157, 000	7. 15	133, 723	6. 09	712, 964	32. 48	152, 204	6. 93
1955 (July 1)	2, 235, 000	431, 291	19. 30	161, 752	7. 24	136, 902	6. 12	729, 945	32. 66	153, 128	6. 85
1956 (July 1)	2, 237, 000	433, 078	19. 36	163, 860	7. 33	137, 880	6. 16	734, 826	32. 85	151, 500	6. 77
1957 (July 1)	2, 252, 000	437, 215	19. 41	166, 807	7. 41	139, 569	6. 20	743, 591	33. 02	150, 801	6. 70
1958 (July 1)	2, 295, 000	446, 966	19. 48	171, 900	7. 49	142, 990	6. 23	761, 856	33. 20	151, 865	6. 62
1959 (July 1)	2, 321, 000	453, 351	19. 53	175, 510	7. 56	145, 467	6. 28	774, 628	33. 37	151, 815	6. 54
1960 (July 1)	2, 358, 000	461, 510	19. 57	179, 989	7. 63	148, 332	6. 29	789, 831	33. 49	152, 914	6. 49
1961 (July 1)	2, 404, 300	467, 848	19. 46	181, 869	7. 56	150, 212	6. 25	799, 929	33. 27	160, 451	6. 67
1962 (July 1)	2, 454, 600	460, 936	18. 78	179, 833	7. 33	149, 805	6. 10	790, 574	32. 21	164, 794	6. 71
1964 (July 1)	2, 572, 231	464, 372	18. 05	190, 033	7. 39	182, 631	7. 10	837, 036	32. 54	196, 496	7. 64
1969 (July 1)	2, 854, 071	504, 610	17. 68	192, 443	6. 74	183, 232	6. 42	880, 285	30. 84	233, 285	8. 17
1974 (July 1)	3, 169, 715	572, 051	18. 05	209, 466	6. 61	190, 239	6. 00	971, 756	30. 66	232, 996	7. 35
1979 (July 1)	3, 562, 563	644, 711	18. 10	241, 430	6. 78	217, 743	6. 11	1, 103, 884	30. 99	255, 426	7. 17

Source of information: Actual figures: For 1899 to 1940, Department of Commerce of the United States, Bureau of the Census, U.S. Census 1940, and for 1950 to 1962 population figures of the Bureau of Demographic Registry and Statistics, Health Department of Puerto Rico. Projections: Calculations made by interpolation of official population projections prepared for this study by the Biostatistics Division of the School of Medicine of the University of Puerto Rico.

TABLE 4.—*Number of 6-year-old children in the population as of July 1 of each year since 1963 to 1979, according to the official population projection for Puerto Rico*

July 1 of the year—	*Population 6-year-olds*
1963	66, 804
1964	68, 304
1965	70, 123
1966	71, 990
1967	73, 870
1968	75, 780
1969	77, 760
1970	79, 807
1971	81, 920
1972	84, 060
1973	86, 210
1974	88, 370
1975	90, 528
1976	92, 620
1977	94, 610
1978	96, 500
1979	98, 240
1980	99, 765

Source of information: The number of 6-year-old children was calculated for this study by the method of interpolation from the distribution of population by age groups provided by the official population projection by the Biostatistics Division of the School of Medicine of the University of Puerto Rico.

TABLE 5.—*Enrollment in public day schools and accredited private schools of Puerto Rico in the school years 1946–47 to 1962–63, by grade, school level and total*

School level and grade	School year								
	1946–47	1947–48	1948–49	1949–50	1950–51	1951–52	1952–53	1953–54	1954–55
Elementary:									
1	76,701	77,668	76,930	79,047	85,324	79,180	86,686	92,700	83,899
2	61,924	63,961	65,238	67,236	71,645	76,953	73,285	80,970	86,843
3	52,103	54,664	56,896	59,614	62,734	66,335	72,319	71,518	80,395
4	40,787	45,062	46,338	50,761	53,624	55,843	60,658	66,201	66,222
5	33,809	34,355	38,029	40,962	44,905	46,944	50,088	53,942	59,682
6	28,690	28,878	29,601	33,661	37,121	39,965	41,625	44,349	48,342
1 to 6, total	294,014	304,588	313,032	331,281	355,353	365,220	384,661	409,680	425,383
Junior high school:									
7	22,586	23,990	24,428	25,853	30,055	31,528	34,572	36,175	38,926
8	19,736	18,999	20,234	21,499	22,892	25,426	26,892	28,873	30,770
9	20,093	17,761	16,715	18,459	19,596	19,881	21,944	22,855	24,799
7 to 9 total	62,415	60,750	61,377	65,811	72,543	76,835	83,408	87,903	94,495
High school:									
10	12,338	13,993	12,489	12,998	14,643	14,988	16,547	18,496	20,449
11	8,517	10,357	11,660	10,939	11,426	11,701	12,117	13,626	15,718
12	6,558	7,617	8,631	9,572	9,162	9,190	9,568	9,889	11,497
10 to 12 total	27,413	31,967	32,780	33,509	35,231	35,879	38,232	42,011	47,664
Total (1 to 12)	383,842	397,305	407,189	430,601	463,127	477,934	506,301	539,594	567,542

	1955–56	1956–57	1957–58	1958–59	1959–60	1960–61	1961–62	1962–63
Elementary:								
1	81,176	79,845	79,966	78,132	83,760	85,540	87,962	88,204
2	78,877	75,740	75,663	74,559	72,045	75,190	77,385	80,362
3	87,312	80,463	76,201	74,823	72,812	70,247	72,748	74,917
4	73,943	79,560	76,070	72,093	71,218	69,477	66,874	69,138
5	59,492	65,680	72,296	69,578	66,455	65,606	64,142	62,005
6	53,116	52,891	58,716	63,542	60,879	58,483	58,516	57,569
1 to 6 total	433,916	434,179	438,912	432,727	427,169	424,543	427,627	432,195
Junior high school:								
7	41,788	45,660	47,312	51,919	56,386	54,698	54,394	54,898
8	32,261	34,928	38,131	39,291	42,360	46,868	46,793	47,019
9	26,251	27,696	29,716	32,370	33,012	35,765	40,312	40,481
7 to 9 total	100,300	108,284	115,159	123,580	131,758	137,331	141,499	142,398
High school:								
10	21,797	23,383	24,514	26,360	28,636	28,785	31,896	35,947
11	17,743	18,082	19,932	21,134	21,566	23,073	24,381	27,107
12	13,618	14,138	14,818	16,736	17,002	17,347	18,851	19,803
10 to 12 total	53,158	55,603	59,264	64,230	67,204	69,205	75,128	82,857
Total (1 to 12)	587,374	598,066	613,335	620,537	626,131	631,079	644,254	657,450

Source of information: Department of Education, Statistical Report for the school years 1958–59 and 1961–62 and Bulletin No. 2 of the Statistics Division of the Department of Education for the school year 1962–63.

Table 6.—*Holding rate from grade to grade in public day schools and accredited private schools of Puerto Rico, school years 1946–47 to 1962–63*

Grade	Holding rates from year to year (in percentages)															
	1946–47 1947–48	1947–48 1948–49	1948–49 1949–50	1949–50 1950–51	1950–51 1951–52	1951–52 1952–53	1952–53 1953–54	1953–54 1954–55	1954–55 1955–56	1955–56 1956–57	1956–57 1957–58	1957–58 1958–59	1958–59 1959–60	1959–60 1960–61	1960–61 1961–62	1961–62 1962–63
1–2	83.39	84.00	87.40	90.64	90.19	92.55	93.41	93.68	94.01	93.30	94.76	93.24	92.21	89.77	90.47	91.36
2–3	88.28	88.95	91.38	93.30	92.59	93.98	97.59	99.29	100.54	102.01	100.61	98.89	97.66	97.50	96.75	96.81
3–4	86.49	84.77	89.22	89.95	89.02	91.44	91.54	92.59	91.97	91.12	94.54	94.61	95.18	95.42	95.19	95.04
4–5	84.23	84.39	88.40	88.46	87.54	89.69	88.93	90.15	89.84	88.83	90.87	91.47	92.18	92.12	92.32	92.72
5–6	85.42	86.16	88.51	90.62	89.00	88.67	88.54	89.62	89.00	88.90	89.40	87.89	87.50	88.00	89.19	89.75
6–7	83.62	84.59	87.34	89.29	84.93	86.51	86.91	87.77	86.44	85.96	89.45	88.42	88.74	89.85	93.01	93.82
7–8	84.12	84.34	88.01	88.55	84.60	85.30	83.52	85.06	82.88	83.58	83.51	83.05	81.59	83.12	85.55	86.44
8–9	89.99	87.98	91.23	91.15	86.85	86.31	84.99	85.89	85.31	85.85	85.08	84.89	84.02	84.43	86.01	86.51
9–10	69.64	70.32	77.76	79.33	76.48	83.23	84.29	89.47	87.89	89.07	88.51	88.71	88.46	87.20	89.18	89.17
10–11	83.94	83.33	87.59	87.91	79.91	80.84	82.35	84.98	86.77	82.96	85.24	86.21	81.81	80.57	84.70	84.99
11–12	89.43	83.33	82.09	83.76	80.43	81.77	81.61	84.38	86.64	79.68	81.95	83.97	80.45	80.44	81.70	81.22

Source of information: Department of Education, annual reports for the school years 1946–47 to 1961–62. Holding rates for the school years 1961–62 to 1962–63 were calculated for this study using the enrollment report for the school year 1962–63 provided by the Statistics Division of the Department of Education.

TABLE 7.—*Cumulative retention from the first to the sixth grade, by number and percentage for the school years 1942–43 to 1962–63 (public day school and accredited schools of Puerto Rico)*

1st grade enrollment		6th grade enrollment		5 years later
School year	Number of students	School year	Number of students	Percent of the 1st grade enrollment
1942–43	65,157	1947–48	28,878	44.32
1943–44	65,669	1948–49	29,601	45.08
1944–45	74,248	1949–50	33,661	45.34
1945–46	76,043	1950–51	37,121	48.82
1946–47	76,701	1951–52	39,965	52.10
1947–48	77,668	1952–53	41,625	53.59
1948–49	76,930	1953–54	44,349	57.65
1949–50	79,047	1954–55	48,342	61.16
1950–51	85,324	1955–56	53,116	62.25
1951–52	79,180	1956–57	52,891	66.80
1952–53	86,686	1957–58	58,716	67.73
1953–54	92,700	1958–59	63,542	68.55
1954–55	83,899	1959–60	60,879	72.56
1955–56	81,176	1960–61	58,483	72.04
1956–57	79,845	1961–62	58,516	73.29
1957–58	79,966	1962–63	57,375	71.75

Source of information: Department of Education of Puerto Rico, annual reports for the school years 1942–43 to 1961–62. Data provided by the Statistic Division of the Department of Education for the school year 1962–63. Cumulative retention refers to the 6th grade enrollment compared with the 1st grade enrollment recorded 5 years earlier. The percentages in this table were calculated for this study.

TABLE 8.—*Cumulative retention from the 7th to the 12th grade, in number and percentage, school years 1942–43 to 1962–63 (public day schools and accredited private schools of Puerto Rico)*

7th grade enrollment		12th grade enrollment		5 years later
School year	Number of students	School year	Number of students	Percent of the 7th grade enrollment
1942–43	17,216	1947–48	7,617	44.24
1943–44	19,649	1948–49	8,631	43.93
1944–45	22,298	1949–50	9,572	42.93
1945–46	22,547	1950–51	9,162	40.64
1946–47	22,586	1951–52	9,190	40.69
1947–48	23,990	1952–53	9,568	39.88
1948–49	24,428	1953–54	9,889	40.48
1949–50	25,853	1954–55	11,497	44.47
1950–51	30,055	1955–56	13,618	45.31
1951–52	31,528	1956–57	14,138	44.84
1952–53	34,572	1957–58	14,818	42.86
1953–54	36,175	1958–59	16,736	46.26
1954–55	38,926	1959–60	17,002	43.68
1955–56	41,788	1960–61	17,347	41.51
1956–57	45,660	1961–62	17,851	39.10
1957–58	47,312	1962–63	19,803	41.86

Source of information: Department of Education, annual reports for the school years 1942–43 to 1961–62. Data provided by the Statistics Division of the Department of Education for the school year 1962–63. Cumulative retention refers to the 12th grade enrollment compared with the 7th grade enrollment recorded 5 years earlier. The percentages in this table were calculated for this study.

TABLE 9.—*Cumulative retention from the 1st to the 12th grades, in number and percentage, school years 1936–37 to 1962–63 (public day schools and accredited private schools of Puerto Rico)*

1st grade enrollment		12th grade enrollment		11 years later
School year	Number of students	School year	Number of students	Percent of the 1st grade enrollment
1936–37	54, 960	1947–48	7, 203	13. 11
1937–38	70, 332	1948–49	8, 631	12. 27
1938–39	70, 646	1949–50	9, 572	13. 55
1939–40	64, 071	1950–51	9, 162	14. 30
1940–41	59, 259	1951–52	9, 190	15. 51
1941–42	67, 179	1952–53	9, 568	14. 24
1942–43	65, 157	1953–54	9, 889	15. 18
1943–44	65, 669	1954–55	11, 497	17. 51
1944–45	74, 248	1955–56	13, 618	18. 34
1945–46	76, 043	1956–57	14, 138	18. 59
1946–47	76, 701	1957–58	14, 818	19. 32
1947–48	77, 668	1958–59	16, 736	18. 97
1948–49	76, 930	1959–60	17, 002	22. 10
1949–50	79, 047	1960–61	17, 347	21. 95
1950–51	85, 324	1961–62	17, 851	22. 09
1951–52	79, 180	1962–63	19, 803	25. 01

Source of information: Department of Education of Puerto Rico, annual reports for the school years 1936–37 to 1961–62. Data provided by the Statistics Division of the Department of Education for the school year 1962–63. Cumulative retention refers to the 12th grade enrollment compared with the 1st grade enrollment recorded 11 years before. The percentages in this table were calculated for this study.

TABLE 10.—*Holding rates from grade to grade used in preparing enrollment Projection CSE–E–6 for the public day schools and accredited private schools of Puerto Rico, school years 1962–63 to 1979–80*

Grade	1961–62 to 1962–63	1962–63 to 1963–64	1963–64 to 1964–65	1964–65 to 1965–66	1965–66 to 1966–67	1966–67 to 1967–68	1967–68 to 1968–69	1968–69 to 1969–70	1969–70 to 1970–71
1–2	91. 36	91. 79	92. 22	92. 65	93. 08	93. 51	93. 94	94. 37	94. 80
2–3	96. 81	96. 99	97. 17	97. 35	97. 53	97. 71	97. 89	98. 07	98. 25
3–4	95. 04	95. 37	95. 70	96. 03	96. 36	96. 69	97. 02	97. 35	97. 68
4–5	92. 72	93. 24	93. 76	94. 28	94. 80	95. 32	95. 84	96. 36	96. 88
5–6	89. 75	90. 27	90. 79	91. 31	91. 83	92. 35	92. 87	93. 39	93. 91
6–7	93. 82	94. 01	94. 20	94. 39	94. 58	94. 77	94. 96	95. 15	95. 34
7–8	86. 44	86. 82	87. 20	87. 58	87. 96	88. 34	88. 72	89. 10	89. 48
8–9	86. 51	86. 88	87. 25	87. 62	87. 99	88. 36	88. 73	89. 10	89. 47
9–10	89. 17	89. 41	89. 65	89. 89	90. 13	90. 37	90. 61	90. 85	91. 09
10–11	84. 99	85. 24	85. 49	85. 74	85. 99	86. 24	86. 49	86. 74	86. 99
11–12	81. 22	81. 74	82. 26	82. 78	83. 30	83. 82	84. 34	84. 86	85. 38
	1970–71 to 1971–72	1971–72 to 1972–73	1972–73 to 1973–74	1973–74 to 1974–75	1974–75 to 1975–76	1975–76 to 1976–77	1976–77 to 1977–78	1977–78 to 1978–79	1978–79 to 1979–80
1–2	95. 23	95. 66	96. 09	96. 52	96. 92	97. 32	97. 72	98. 12	98. 52
2–3	98. 43	98. 61	98. 79	98. 97	99. 08	99. 19	99. 30	99. 41	99. 52
3–4	98. 01	98. 34	98. 67	99. 00	99. 16	99. 32	99. 48	99. 64	99. 80
4–5	97. 40	97. 92	98. 44	98. 96	99. 06	99. 16	99. 26	99. 36	99. 46
5–6	94. 43	94. 95	95. 47	95. 99	96. 39	96. 79	97. 19	97. 59	97. 99
6–7	95. 53	95. 72	95. 91	96. 10	96. 32	96. 54	96. 76	96. 98	97. 20
7–8	89. 86	90. 24	90. 62	91. 00	91. 04	91. 08	91. 12	91. 16	91. 20
8–9	89. 84	90. 21	90. 58	90. 95	91. 01	91. 07	91. 13	91. 19	91. 25
9–10	91. 33	91. 57	91. 81	92. 05	92. 30	92. 55	92. 80	93. 05	93. 30
10–11	87. 24	87. 49	87. 74	87. 99	88. 29	88. 59	88. 89	89. 19	89. 49
11–12	85. 90	86. 42	86. 94	87. 46	87. 98	88. 50	89. 02	89. 54	90. 06

Source of information: Retention rates of the school years 1961–62 to 1962–63 were taken from table 13 of this study. Retention rates for the school years 1962–63 to 1979–80 were worked out for this study.

Table 11.—*Projection CSE–E–6—Enrollment in public day schools and accredited private schools of Puerto Rico in the school years 1962–63 to 1979–80, by grade, school level and total*

Grade	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71
Elementary level:									
1	88,204	88,967	89,757	91,139	92,485	93,816	95,256	96,726	98,222
2	80,362	80,962	82,045	83,160	84,832	86,483	88,131	89,893	91,696
3	74,917	77,943	78,671	79,871	81,106	82,889	84,658	86,430	88,320
4	69,138	71,448	74,591	75,548	76,964	78,421	80,419	82,415	84,425
5	62,005	64,464	66,990	70,324	71,620	73,362	75,159	77,492	79,844
6	57,569	55,972	58,527	61,169	64,579	66,141	68,131	70,191	72,773
1 to 6, total	432,195	439,821	450,581	461,211	471,586	481,112	491,754	503,147	515,280
Junior high school level:									
7	54,898	54,121	52,726	55,244	57,854	61,202	62,807	64,827	66,920
8	47,019	47,662	47,194	46,177	48,593	51,108	54,298	55,961	58,007
9	40,481	40,850	41,585	41,351	40,631	42,937	45,348	48,380	50,068
7 to 9, total	142,398	142,633	141,505	142,772	147,078	155,247	162,453	169,168	174,995
High school level:									
10	35,947	36,194	36,622	37,381	37,270	36,718	38,905	41,199	44,069
11	27,107	30,641	30,942	31,400	32,144	32,142	31,757	33,746	35,839
12	19,803	22,157	25,205	25,614	26,156	26,943	27,109	26,949	28,812
10 to 12, total	82,857	88,992	92,769	94,395	95,570	95,803	97,771	101,894	108,720
Total (1 to 12)	657,450	671,446	684,855	698,378	714,234	732,162	751,978	774,209	798,995
	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Elementary level:									
1	99,695	101,211	102,686	104,107	105,587	107,099	108,659	110,225	111,737
2	93,537	95,368	97,254	99,113	100,901	102,757	104,657	106,616	108,594
3	90,256	92,237	94,214	96,252	98,201	100,084	102,038	104,040	106,104
4	86,562	88,758	91,010	93,272	95,443	97,533	99,564	101,671	103,832
5	82,230	84,762	87,373	90,063	92,395	94,641	96,811	98,927	101,122
6	75,397	78,077	80,922	83,869	86,812	89,429	91,982	94,478	96,939
1 to 6, total	527,677	540,413	553,459	566,676	579.339	591,543	603,711	615,957	628,328
Junior high school level:									
7	69,520	72,170	74,884	77,766	80,783	83,808	86,532	89,204	91,833
8	60,134	62,735	65,400	68,144	70,798	73,577	76,366	78,883	81,354
9	52,113	54,247	56,825	59,481	62,018	64,476	67,051	69,638	71,981
7 to 9, total	181,767	189,152	197,109	205,391	213,599	221,861	229,949	237,725	245,168
High school level:									
10	45,727	47,720	49,804	52,307	54,901	57,398	59,834	62,391	64,972
11	38,446	40,007	41,870	43,823	46,182	48,637	51,021	53,366	55,834
12	30,786	33,225	34,782	36,620	38,555	40,871	43,297	45,684	48,061
10 to 12, total	114,959	120,952	126,456	132,750	139,638	146,906	154,152	161,441	168,867
Total (1 to 12)	824,403	850,517	877,024	904,817	932,576	960,310	987,812	1,015,123	1,042,363

Source of information: (*a*) Enrollment for the school year 1962–63 was taken from Bulletin No. 2 of the Statistics Division of the Department of Education (actual data). (*b*) First grade enrollment from the school year 1963–64 to 1979–80 was taken from the projections of Superior Educational Council. (*c*) Enrollment from the 2d to the 12th grade from the school year 1963–64 to 1979–80 was calculated applying projected holding rates from grade to grade to the enrollments obtained from sources (*a*) and (*b*).

TABLE 12.—*Enrollment coefficients (total and for the elementary, junior high school and high school levels) of the educational system of Puerto Rico in the school years 1950–51 to 1962–63 (public day and accredited private schools of Puerto Rico)*

School year	Population*				Total enrollment and enrollment by school levels				Enrollment Coefficients (in percent)			
	6–18 years	6–12 years	13–15 years	16–18 years	Total	Elementary	Junior high school	High school	Total	Elementary	Junior high school	High school
1950–51	703, 803	421, 220	150, 732	131, 851	463, 127	355, 353	72, 543	35, 231	65. 80	84. 36	48. 13	26. 72
1951–52	709. 954	423, 789	153, 160	133, 005	477, 934	365, 220	76, 835	35, 879	67. 32	86. 18	50. 17	26. 98
1952–53	707, 038	420, 951	153, 600	132, 487	506, 301	384, 661	83, 408	38, 232	71. 61	91. 38	54. 30	28. 86
1953–54	704, 705	418, 469	154, 152	132, 064	539, 594	409, 680	87, 903	42, 011	76. 57	97. 90	57. 02	31. 81
1954–55	712, 964	422, 241	157, 000	133, 723	567, 542	425, 383	94, 495	47, 664	79. 60	100. 74	60. 19	35. 64
1955–56	729, 945	431, 291	161, 752	136, 902	587, 374	433. 916	100, 300	53, 158	80. 47	100. 61	62. 01	38. 83
1956–57	734, 826	433, 078	163. 860	137, 880	598, 066	434, 179	108, 284	55, 603	81. 39	100. 25	66. 08	40. 33
1957–58	743, 591	437, 215	166, 807	139. 569	613, 335	438, 912	115, 159	59, 264	82. 48	100. 39	69. 04	42. 46
1958–59	761, 856	446, 966	171, 900	142, 990	620, 537	432, 727	123, 580	64, 230	81. 45	96. 81	71. 89	44. 92
1959–60	774, 628	453, 351	175, 510	145, 467	626, 131	427, 139	131, 758	67, 204	80. 83	94. 22	75. 07	46. 20
1960–61	789, 831	461, 510	179, 989	148, 332	631, 079	424, 543	137, 331	69, 205	79. 90	91. 99	76. 30	46. 66
1961–62	799, 929	467, 848	181, 869	150, 212	644, 254	427, 627	141, 499	75, 128	80. 54	91. 40	77. 80	50. 01
1962–63	790. 574	460, 936	179, 833	149, 805	657. 450	432, 195	142, 398	82, 857	83. 17	93. 76	79. 18	55. 31

*As of July 1 of the school year.

Source of information: (1) Population: Health Department of Puerto Rico, Bureau of Demographic Statistics. (2) Enrollment: Department of Education of Puerto Rico, Statistics Division, annual report 1961–62 (table number 29) and bulletin number 2, 1962–63.

(3) Enrollment coefficient: Enrollment coefficient refers to the total elementary, junior high school and high school enrollment compared with the population of the age groups 6–18 years, 6–12 years, 13–15 years, and 16–18 years, respectively. The enrollment coefficients were calculated for this study.

TABLE 13.—*Enrollment coefficients of the elementary level (grades 1 to 6) for the enrollment predictions of the projections CSE–E–1, 6 and 9 for the school years 1964–65, 1969–70, 1974–80 (public day and accredited private school of Puerto Rico)*

School year	Population 6–12 years old	Enrollment in elementary school level (grades 1 to 6)					
		Projection CSE–E–1		Projection CSE–E–6		Projection CSE–E–9	
		Number	Enrollment coefficient	Number	Enrollment coefficient	Number	Enrollment coefficient
1964–65	464,372	449,719	96.84	450,581	97.03	451,365	97.20
1969–70	504,610	498,004	98.69	503,147	99.71	508,214	100.71
1974–75	572,051	555,929	97.18	566,676	99.06	577,468	100.95
1979–80	644,711	618,659	95.96	628,328	97.46	635,916	98.64

Source of information: (*a*) Population: Planning Board of Puerto Rico, official projection provided to the public agencies and corporations, June 1, 1962. (*b*) Elementary school level enrollment: It was taken from the indicated projections. (*c*) Enrollment coefficient: It was calculated for this study.

TABLE 14.—*Enrollment coefficient of the junior high school level (grades 7 to 9) for the enrollment predictions of the projections CSE–E–1, 6 and 9 for the school years 1964–65, 1969–70, 1974–75, and 1979–80 (public day and accredited private schools of Puerto Rico)*

School year	Population 13–15 years old	Enrollment in junior high school level (grades 7 to 9)					
		Projection CSE–E–1		Projection CSE–E–6		Projection CSE–E–9	
		Number	Enrollment coefficient	Number	Enrollment coefficient	Number	Enrollment coefficient
1964–65	190,033	140,502	73.94	141,505	74.46	142,881	75.19
1969–70	192,443	161,570	83.96	169,168	87.91	178,287	92.64
1974–75	209,466	187,587	89.55	205,391	98.05	225,125	107.48
1979–80	241,430	220,635	91.39	245,168	101.55	277,306	114.86

Source of information: (*a*) Population: Planning Board of Puerto Rico, official projection provided to the public agencies and corporations, June 1, 1962. (*b*) Elementary school level enrollment: It was taken from the indicated projections. (*c*) Enrollment coefficient: It was calculated for this study.

TABLE 15.—*Enrollment coefficients of the high school level (grades 10 to 12) for the enrollment predictions of the projections CSE–E–1, 6 and 9 for the school years 1964–65, 1969–70, 1974–75, and 1979–80 (public day and accredited private schools of Puerto Rico)*

School year	Population 16–18 years old	Enrollment in high school level (grades 10–12)					
		Projection CSE–E–1		Projection CSE–E–6		Projection CSE–E–9	
		Number	Enrollment coefficient	Number	Enrollment coefficient	Number	Enrollment coefficient
1964–65	182,631	92,366	50.58	92,769	50.80	92,889	50.86
1969–70	183,232	96,927	52.90	101,894	55.61	106,943	58.36
1974–75	190,239	118,035	62.05	132,750	69.78	148,954	78.30
1979–80	217,743	142,647	65.51	168,867	77.55	201,431	92.51

Source of information: (*a*) Population: Planning Board of Puerto Rico, official projection provided to the public agencies and corporations, June 1, 1962. (*b*) Elementary school level enrollment: It was taken from the indicated projections. (*c*) Enrollment coefficient: It was calculated for this study.

TABLE 16.—*Total enrollment coefficients (grades 1 to 12) for the enrollment predictions of the projections CSE–E–1, 6 and 9 for the school years 1964–65, 1969–70, 1974–75, and 1979–80 (public day and accredited private schools of Puerto Rico)*

School year	Population 6–18 years old	Total enrollment (grades 1 to 12)					
		Projection CSE–E–1		Projection CSE–E–6		Projection CSE–E–9	
		Number	Enrollment coefficient	Number	Enrollment coefficient	Number	Enrollment coefficient
1964–65	837, 036	682, 587	81. 55	684, 855	81. 82	687, 135	82. 09
1969–70	880, 285	756, 501	85. 94	774, 209	87. 95	793, 444	90. 13
1974–75	971, 756	861, 551	88. 66	904, 817	93. 11	951, 547	97. 92
1979–80	1, 103, 884	981, 941	88. 95	1, 042, 363	94. 43	1, 114, 653	100. 98

Source of information: (*a*) Population: Planning Board of Puerto Rico, official projection provided to the public agencies and corporations, June 1, 1962. (*b*) Elementary school level enrollment: It was taken from the indicated projections. (*c*) Enrollment coefficient: It was calculated for this study.

TABLE 17.—*Sixth grade graduates as a percentage of the 6th grade enrollment in the public day and accredited private schools of Puerto Rico; school years 1947–48 to 1961–62*

School year	6th grade enrollment	6th grade graduates	6th grade graduates as percentage of the enrollment
1947–48	28, 878	26, 019	90. 1
1948–49	29, 601	27, 394	92. 5
1949–50	33, 661	31, 857	94. 6
1950–51	37, 121	34, 452	92. 8
1951–52	39, 965	36, 634	91. 7
1952–53	41, 625	38, 391	92. 2
1953–54	44, 349	40, 559	91. 5
1954–55	48, 342	44, 258	91. 6
1955–56	53, 116	47, 683	89. 8
1956–57	52, 891	46, 793	88. 5
1957–58	58, 716	50, 608	86. 2
1958–59	63, 542	54, 046	85. 1
1959–60	60, 879	52, 238	85. 8
1960–61	58, 483	50, 869	87. 0
1961–62	58, 516	51, 372	87. 8

Source of information: Enrollment and graduates data: Department of Education of Puerto Rico—Annual reports for the school years 1947–48 to 1961–62. Percentages were calculated for this study.

TABLE 18.—*Ninth grade graduates as a percentage of the 9th grade enrollment in the public day and accredited private schools of Puerto Rico, school years 1947–48 to 1961–62*

School year	9th grade enrollment	9th grade graduates	9th grade graduates as percentage of the enrollment
1947–48	17, 761	15, 934	89. 7
1948–49	16, 715	15, 396	92. 1
1949–50	18, 459	17, 344	94. 0
1950–51	19, 596	18, 100	92. 4
1951–52	19, 881	18, 102	91. 1
1952–53	21, 944	20, 092	91. 6
1953–54	22, 855	20, 828	91. 1
1954–55	24, 799	22, 632	91. 3
1955–56	26, 251	23, 543	89. 7
1956–57	27, 696	24, 545	88. 6
1957–58	29, 716	26, 293	88. 5
1958–59	32, 370	28, 059	86. 7
1959–60	33, 012	28, 445	86. 2
1960–61	35, 765	31, 573	88. 3
1961–62	40, 312	36, 047	89. 4

Source of information: Enrollment and graduates data: Department of Education of Puerto Rico—Annual reports for the school years 1947–48 to 1961–62. The percentages were calculated for this study.

TABLE 19.—*Twelfth grade graduates as a percentage of the 12th grade enrollment in the public day and accredited private schools of Puerto Rico, school years 1947–48 to 1961–62*

School year	12th grade enrollment	12th grade graduates	12th grade graduates as percentage of the enrollment
1947–48	7, 203	6, 550	90. 9
1948–49	8, 631	7, 739	89. 7
1949–50	9, 572	9, 011	94. 1
1950–51	9, 162	8, 182	89. 3
1951–52	9, 190	8, 074	87. 9
1952–53	9, 568	8, 455	88. 4
1953–54	9, 889	8, 855	89. 5
1954–55	11, 497	10, 054	87. 5
1955–56	13, 618	11, 126	81. 7
1956–57	14, 138	12, 250	86. 7
1957–58	14, 818	12, 704	85. 7
1958–59	16, 736	14, 639	87. 5
1959–60	17, 002	14, 394	84. 7
1960–61	17, 347	15, 524	89. 5
1961–62	18, 851	16, 959	90. 0

Source of information: Enrollment and graduates data: Department of Education of Puerto Rico—Annual reports for the school years 1947–48 to 1961–62. Percentages were calculated for this study.

TABLE 20.—*Total enrollment and enrollment by levels (elementary, junior high school, and high school) in public day schools and accredited private schools of Puerto Rico for the school years 1898, 1909–10, 1919–20, 1929–30, 1939–40, 1949–50 to 1962–63*

School year	Enrollment, all levels (grades 1 to 12)			Enrollment, elementary level (grades 1 to 6)			Enrollment, junior high school level (grades 7 to 9)			Enrollment, high school level (grades 10 to 12)		
	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private
1898	(1)	25,644	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
1909–10	(1)	95,314	(1)	(1)	92,502	(1)	(1)	2,608	(1)	(1)	204	(1)
1919–20	(1)	178,035	[2] 5,830	(1)	167,334	(1)	(1)	8,764	(1)	(1)	1,937	(1)
1929–30	226,550	221,197	5,353	204,698	200,985	3,713	17,070	15,983	1,087	4,782	4,229	553
1939–40	296,629	286,098	10,531	246,662	240,023	6,639	37,527	35,386	2,141	12,440	10,689	1,751
1949–50	430,601	408,083	22,518	331,281	317,121	14,160	65,811	61,851	3,960	33,509	29,111	4,398
1950–51	463,127	439,639	23,488	355,353	340,004	15,349	72,543	68,415	4,128	35,231	31,220	4,011
1951–52	477,934	452,603	25,331	365,220	348,287	16,933	76,835	72,499	4,336	35,879	31,817	4,062
1952–53	506,301	475,579	30,722	384,661	364,004	20,657	83,408	78,077	5,331	38,232	33,498	4,734
1953–54	539,594	505,092	34,502	409,680	387,077	22,603	87,903	81,946	5,957	42,011	36,069	5,942
1954–55	567,542	528,615	38,927	425,383	401,775	23,608	94,495	87,472	7,023	47,664	39,368	8,296
1955–56	587,374	544,817	42,557	433,916	409,039	24,877	100,300	92,664	7,646	53,158	43,114	10,044
1956–57	598,066	553,388	44,678	434,179	407,559	26,620	108,284	99,997	8,287	55,603	45,832	9,771
1957–58	613,335	564,041	49,294	438,912	409,223	29,689	115,159	106,043	9,116	59,264	48,775	10,489
1958–59	620,537	568,804	51,733	432,727	401,422	31,305	123,580	113,437	10,143	64,230	53,945	10,285
1959–60	626,131	572,705	53,426	427,169	394,364	32,805	131,758	120,622	11,136	67,204	57,719	9,485
1960–61	631,079	577,045	54,034	424,543	391,189	33,354	137,331	125,298	12,033	69,205	60,558	8,647
1961–62	644,254	588,490	55,764	427,627	393,495	34,132	141,499	128,642	12,857	75,128	66,353	8,775
1962–63	657,450	596,804	60,646	432,195	394,742	37,453	142,398	128,762	13,636	82,857	73,300	9,557

[1] Information is not available.

[2] Estimated on the basis of the Commissioner's Report, 1920–21, pp. 304 and 400.

Source of information: For 1898, Commissioner's Report, Department of Education, 1909–10, p. 22. For 1909–10 to 1929–30, Commissioner's Report, Department of Education, 1938–39. Private school enrollment for 1929–30 was obtained from the files of the Statistics Division of the Department of Education. Information for 1939–40 was obtained from the report of the Commissioner of Education for that year. Information for 1949–50 to 1961–62 was obtained from the annual statistical report of the Secretary of Education, Department of Education, 1961–62. Information for 1962–63 was obtained from bulletin no. 2—report on enrollment and personnel at the end of the 6th school month, Statistics Division, Department of Education, 1962–63.

TABLE 21.—*First year enrollment at university level, 12th grade graduates and 1st year enrollment at university level as percentage of the 12th grade graduates, for the school years 1950–51 to 1960–61 (public and accredited private day schools and institutions of higher education of Puerto Rico)*

School year	Enrollment 1st year of university	12th grade graduates (preceding school year)	Enrollment of 1st year of university—Percentage of the 12th grade graduates
1950–51	3,425	9,011	38.0
1951–52	3,056	8,182	37.4
1952–53	2,939	8,074	36.4
1953–54	3,868	8,455	45.7
1954–55	4,862	8,855	54.9
1955–56	5,202	10,054	51.7
1956–57	5,734	11,126	51.5
1957–58	6,558	12,250	53.5
1958–59	6,406	12,704	50.4
1959–60	6,479	14,639	44.3
1960–61	7,797	14,394	54.2

Source of information: (*a*) Enrollment, first year of university: Official enrollment data provided to the Superior Council on Education annually by public and accredited private university level institutions of Puerto Rico. (*b*) Twelfth grade graduates: Department of Education of Puerto Rico—Annual reports for the school years 1949–50 to 1959–60. (*c*) Percentages were calculated for this study.

TABLE 22.—*Projections CSE–UT–1, 5, 15, 23, 27, 50, and 54: Total enrollment in accredited institutions at university level, according to projections CSE–UT–1, 2, 5, 11, 12, 24, and 27 of 1st year enrollment at this educational level for school years 1963–64 to 1980–81*

School year	Projection													
	CSE–UT–1		CSE–UT–2 (1st year)	CSE–UT–5, total	CSE–UI–5 (1st year)	CSE–UT–15, total	CSE–UI–11 (1st year)	CSE–UT–23, total	CSE–UI–12 (1st year)	CSE–UT–27, total	CSE–UI–24 (1st year)	CSE–UT–50, total	CSE–UI–27 (1st year)	CSE–UT–54, total
	1st year	Total												
1963–64	9, 186	28, 706	9, 805	33, 579	9, 805	36, 315	9, 805	33, 579	10, 423	38, 604	10, 423	35, 696	10, 423	38, 604
1964–65	9, 532	29, 788	10, 174	34, 842	10, 508	38, 918	10, 199	34, 929	10, 842	40, 156	11, 199	38, 353	11, 555	42, 796
1965–66	10, 795	33, 734	11, 522	39, 459	11, 899	44, 070	11, 602	39, 733	12, 334	45, 681	12, 740	43, 631	13, 145	48, 685
1966–67	10, 923	34, 134	11, 658	39, 925	12, 040	44, 593	11, 790	40, 377	12, 534	46, 422	12, 939	44, 312	13, 350	49, 444
1967–68	11, 071	34, 597	11, 816	40, 466	12, 204	45, 200	12, 040	41, 233	12, 799	47, 404	13, 271	45, 449	13, 693	50, 715
1968–69	11, 292	35, 288	12, 053	41, 278	12, 448	46, 104	12, 402	42, 473	13, 184	48, 830	13, 785	47, 209	14, 223	52, 678
1969–70	11, 225	35, 078	11, 981	41, 031	12, 374	45, 830	12, 478	42, 773	13, 266	49, 133	14, 015	47, 997	14, 560	53, 926
1970–71	11, 008	34, 400	11, 750	40, 240	12, 135	44, 944	12, 405	42, 483	13, 187	48, 841	14, 099	48, 285	14, 546	53, 874
1971–72	11, 596	36, 238	12, 377	42, 388	12, 783	47, 344	13, 262	45, 418	14, 099	52, 218	15, 258	52, 254	15, 743	58, 307
1972–73	12, 201	38, 128	13, 023	44, 600	13, 450	49, 815	14, 171	48, 531	15, 065	55, 796	16, 512	56, 549	17, 036	63, 096
1973–74	12, 968	40, 525	13, 841	47, 401	14, 295	52, 944	15, 294	52, 377	16, 258	60, 215	18, 056	61, 836	18, 629	68, 996
1974–75	13, 353	41, 728	14, 252	48, 809	14, 720	54, 518	16, 010	54, 829	17, 020	63, 037	19, 169	65, 648	19, 777	73, 248
1975–76	13, 833	43, 228	14, 765	50, 566	15, 249	56, 478	16, 856	57, 727	17, 919	66, 367	20, 462	70, 076	21, 112	78, 193
1976–77	14, 333	44, 791	15, 298	52, 391	15, 800	58, 518	17, 747	60, 778	18, 867	69, 878	21, 830	74, 761	22, 523	83, 418
1977–78	14, 942	46, 694	15, 948	54, 617	16, 472	61, 007	18, 813	64, 429	20, 000	74, 074	23, 480	80, 412	24, 225	89, 722
1978–79	15, 572	48, 663	16, 620	56, 919	17, 165	63, 574	19, 930	68, 254	21, 187	78, 470	25, 222	86, 378	26, 022	96, 378
1979–80	16, 214	50, 669	17, 306	59, 268	17, 873	66, 196	21, 029	72, 018	22, 355	82, 796	26, 190	89, 693	27, 021	100, 078
1980–81	16, 902	52, 819	18, 040	61, 782	18, 631	69, 004	22, 123	75, 765	23, 518	87, 104	28, 743	98, 436	29, 655	109, 833

Source of information: (*a*) First year enrollment: School years 1963–64 to 1980–81. Data taken from the indicated projections, table 43 of the study. (*b*) Total enrollment—Calculated for this study on the basis of the following assumptions:

Assumption 1—Projection CSE–UT–1: That first year enrollment in institutions at university level will be equivalent to 32 percent of the total enrollment of these institutions in any given school year from 1964–65 on.

Assumption 2—Projections CSE–UT–5, 23, and 50: That 1st year enrollment in university level institutions will be equivalent to 29.2 percent of the total enrollment of these institutions in any given school year from 1964–65 on.

Assumption 3—Projections CSE–UT–15, 27 and 54: That 1st year enrollment in institutions at university level will be equivalent to 27 percent of the total enrollment of these institutions in any given school year from 1964–65 on.

Table 23.—*Total enrollment for the first semester in public and accredited private institutions at university level in Puerto Rico, school years 1909–10 to 1963–64*

School year 1st semester:	*Total enrollment university level*
1909–10	376
1919–20	1, 010
1929–30	1, 871
1939–40	5, 371
1949–50	12, 497
1950–51	13, 468
1951–52	12, 985
1952–53	12, 648
1953–54	14, 274
1954–55	16, 208
1955–56	17, 855
1956–57	19, 277
1957–58	21, 168
1958–59	[1] 22, 898
1959–60	24, 529
1960–61	26, 540
1961–62	30, 173
1962–63	31, 741
1963–64	[2] 33, 331

[1] Enrollment figures from the school year 1958–59 on include enrollment in extension courses of the Inter American University of Puerto Rico. Prior to the school year 1958–59 there is no information available in this respect for this institution.

[2] Total enrollment data for the school year 1963–64 are preliminary.

Source of information: Total enrollment at university level according to information supplied to the Superior Council on Education by public and accredited private institutions at university level.

Table 24.—*Enrollment coefficient at university level of the educational system of Puerto Rico in the school years 1909–10, 1919–20, 1929–30, 1939–40, and 1949–50 to 1962–63 (public and accredited private university level institutions of Puerto Rico)*

School year	Total enrollment university level	Date	Population		Enrollment coefficient based on population	
			18–21-year-old	19–22-year-old	18–21-year-old	19–22-year-old
1909–10	376	1910 (abril 15)	96, 668	87, 863	0. 39	0. 43
1919–20	1, 010	1920 (enero 1)	107, 216	102, 368	. 94	. 99
1929–30	1, 871	1930 (abril 1)	151, 247	126, 832	1. 24	1. 48
1939–40	5, 371	1940 (abril 1)	171, 186	165, 025	3. 14	3. 25
1949–50	12, 497	1949 (julio 1)	164, 562	161, 628	7. 59	7. 73
1950–51	13, 468	1950 (julio 1)	164, 693	161, 124	8. 18	8. 36
1951–52	12, 985	1951 (julio 1)	164, 052	159, 603	7. 92	8. 14
1952–53	12, 648	1952 (julio 1)	161, 448	156, 212	7. 83	8. 10
1953–54	14, 274	1953 (julio 1)	159, 049	153, 050	8. 97	9. 33
1954–55	16, 208	1954 (julio 1)	159, 080	152, 204	10. 19	10. 65
1955–56	17, 855	1955 (julio 1)	160, 948	153, 128	11. 09	11. 66
1956–57	19, 277	1956 (julio 1)	160, 169	151, 500	12. 04	12. 72
1957–58	21, 168	1957 (julio 1)	160, 320	150, 801	13. 20	14. 04
1958–59	22, 898	1958 (julio 1)	162, 378	151, 865	14. 10	15. 08
1959–60	24, 529	1959 (julio 1)	163, 293	151, 815	15. 02	16. 16
1960–61	26, 540	1960 (julio 1)	165, 167	152, 914	16. 07	17. 36
1961–62	30, 173	1961 (julio 1)	171, 170	160, 451	17. 63	18. 81
1962–63	31, 741	1962 (julio 1)	174, 007	164, 794	18. 24	19. 26

Source of information: (*a*) Total enrollment at university level: data from Table 46 of this study. (*b*) 18–22-year-old population: Bureau of Demographic Registry and Statistics, Health Department of Puerto Rico. (*c*) Enrollment coefficient at university level: Computed for this study.

TABLE 25.—*Enrollment coefficient (based on the population of the age groups 18–21 and 19–22) at university level for the enrollment predictions of projections CSE–UT–1, 5, 15, 23, 27, 50, and 54 for the school years 1964–65, 1969–70, 1974–75 and 1979–80 (public and accredited private university level institutions of Puerto Rico)*

School year	Enrollment and enrollment coefficient for each projection														
	Population 18–21 years [1]	Projection CSE–UT–1		Projection CSE–UT–5		Projection CSE–UT–15		Projection CSE–UT–23		Projection CSE–UT–27		Projection CSE–UT–50		Projection CSE–UT–54	
		Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient
1964–65	210,963	29,788	14.12	34,842	16.52	38,918	18.45	34,929	16.56	40,156	19.03	38,353	18.18	42,796	20.29
1969–70	236,873	35,078	14.81	41,031	17.32	45,830	19.35	42,733	18.04	49,133	20.74	47,997	20.26	53,926	22.77
1974–75	238,352	41,728	17.51	48,809	20.48	54,518	22.87	54,829	23.00	63,037	26.45	65,648	27.54	73,248	30.73
1979–80	264,999	50,669	19.12	59,268	22.37	66,196	24.98	72,018	27.18	82,796	31.24	89,693	33.85	100,078	37.77
	Population 19–22 years [1]	Projection CSE–UT–1		Projection CSE–UT–5		Projection CSE–UT–15		Projection CSE–UT–23		Projection CSE–UT–27		Projection CSE–UT–50		Projection CSE–UT–54	
		Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient	Enrollment	Coefficient
1964–65	196,496	29,788	15.16	34,842	17.73	38,918	19.81	34,929	17.78	40,156	20.44	38,353	19.52	42,796	21.78
1969–70	233,285	35,078	15.04	41,031	17.59	45,830	19.65	42,733	18.32	49,133	21.06	47,997	20.57	53,926	23.12
1974–75	232,996	41,728	17.91	48,809	20.95	54,518	23.40	54,829	23.53	63,037	27.05	65,648	28.18	73,248	31.44
1979–80	255,426	50,669	19.84	59,268	23.20	66,196	25.92	72,018	28.20	82,796	32.41	89,693	35.12	100,078	39.18

[1] Population as of July 1 of the school year.

Source of information: Population: Puerto Rico Planning Board, Official projection provided to public agencies and corporations, June 1, 1962. Total university enrollment: Taken from the indicated projections, table 45 of this study. Enrollment coefficient: Calculated for this study.

TABLE 26.—*Total number of bachelor graduates as percentage of the total enrollment registered in the public and accredited private institutions at university level of Puerto Rico, school years 1949–50 to 1958–59*

School year	Total enrollment (1st semester; all institutions)	Bachelor degrees granted (all institutions)	Bachelor degrees as percentage of the enrollment
1949–50	12,497	1,214	9.71
1950–51	13,468	1,122	8.34
1951–52	12,985	1,190	9.16
1952–53	12,648	1,162	9.19
1953–54	14,274	1,267	8.88
1954–55	16,208	1,463	9.03
1955–56	17,855	1,669	9.35
1956–57	19,277	1,792	9.30
1957–58	21,168	2,086	9.85
1958–59	22,898	2,116	9.24

Source of information: Official data on enrollment and graduates provided annually to the Superior Council on Education by public and private accredited institutions at university level of Puerto Rico.

TABLE 27.—*Total enrollment in university level institutions distributed (in number and percentage) by the University of Puerto Rico (public sector) and accredited private colleges and universities (private sector) in the school years 1909–10 to 1963–64 (enrollment for the 1st semester)*

School year 1st semester	Distribution of total university enrollment					
	Number			Percent		
	Total	Public sector (University of Puerto Rico)	Private sector (private colleges and universities)	Total	Public sector (University of Puerto Rico)	Private sector (private colleges and universities)
1909–10	376	376	-----	100	100.00	0
1919–20	1,010	744	266	100	73.66	26.34
1929–30	1,871	1,466	405	100	78.35	21.65
1939–40	5,371	4,987	384	100	92.85	7.15
1949–50	12,497	11,348	1,149	100	90.81	9.19
1950–51	13,468	11,343	2,125	100	84.22	15.78
1951–52	12,985	10,890	2,095	100	83.87	16.13
1952–53	12,648	10,579	2,069	100	83.64	16.36
1953–54	14,274	12,151	2,123	100	85.13	14.87
1954–55	16,208	13,232	2,976	100	81.64	18.36
1955–56	17,855	14,268	3,587	100	79.91	20.09
1956–57	19,277	15,176	4,101	100	78.73	21.27
1957–58	21,168	16,753	4,415	100	79.14	20.86
1958–59	22,898	17,644	5,254	100	77.05	22.95
1959–60	24,529	18,223	6,306	100	74.29	25.71
1960–61	26,540	18,893	7,647	100	71.19	28.81
1961–62	30,173	21,262	8,911	100	70.47	29.53
1962–63	31,741	21,892	9,849	100	68.97	31.03
1963–64	33,331	22,959	10,372	100	68.88	31.12

Source of information: (1) Total enrollment in the university level according to information provided to the Superior Council on Education by public and private accredited institutions at university level (2) Distribution of enrollment (in number and percentage) by the 2 sectors was prepared for this study.

TABLE 28.—*Total enrollment in institutions at university level according to Projections CSE–UT–1, 5, 15, 23, 27, 50, and 54 distributed according to Assumption 2 by public and private accredited university level institutions of Puerto Rico for the school years 1964–65, 1969–70, 1974–75, and 1979–80*

School year (1st semester)	Total university enrollment according to projections distributed by sectors											
	Projection CSE–UT–1			Projection CSE–UT–5			Projection CSE–UT–15			Projection CSE–UT–23		
	Total	Public 2	Private 2	Total	Public 2	Private 2	Total	Public 2	Private 2	Total	Public 2	Private 2
1964–65	29,788	20,852	8,936	34,842	24,389	10,453	38,918	27,243	11,675	34,929	24,450	10,479
1969–70	35,078	25,256	9,822	41,031	29,542	11,489	45,830	32,998	12,832	42,733	30,768	11,965
1974–75	41,728	31,296	10,432	48,809	36,607	12,202	54,518	40,889	13,629	54,829	41,122	13,707
1979–80	50,669	39,522	11,147	59,268	46,229	13,039	66,196	51,633	14,563	72,018	56,174	15,844

School year (1st semester)	Projection CSE–UT–27			Projection CSE–UT–50			Projection CSE–UT–54		
	Total	Public 2	Private 2	Total	Public 2	Private 2	Total	Public 2	Private 2
1964–65	40,156	28,109	12,047	38,353	26,847	11,506	42,796	29,957	12,839
1969–70	49,133	35,376	13,757	47,997	34,558	13,439	53,926	38,827	15,099
1974–75	63,037	47,278	15,759	65,648	49,236	16,412	73,248	54,936	18,312
1979–80	82,796	64,581	18,215	89,693	69,961	19,732	100,078	78,061	22,017

Source of information: (1) The indicated projections of total enrollment in institutions at university level were taken from table 45 of this study.

(2) The distribution of total enrollment according to the University of Puerto Rico (public sector) and the private accredited colleges and universities (private sector) was prepared for this study on the basis of the following: That the total enrollment indicated by the projections will be distributed between the University of Puerto Rico and the private accredited colleges and universities in the following way: the University of Puerto Rico will take care of 70 percent of the total enrollment in the school year 1964–65 and will go on increasing this proportion until it takes care of 72 percent in 1970, 75 percent in 1975 and 78 percent in 1980. Private accredited colleges and universities will take care of 30 percent of the total enrollment in 1964–65, diminishing this proportion until they reach 28 percent in 1970, 25 percent in 1975 and 22 percent in 1980.

Table 29.—*Holding rates of students enrolled in the undergraduate level (1st to 4th years) of accredited university level institutions of Puerto Rico, according to their classification by year they were studying in the years 1954–55 to 1959–60*

School year (1st semester)	Enrollment by year of classification and holding rate from year to year (in percent)						
	I	Retention I-II year	II	Retention II-III year	III	Retention III-IV year	IV
1954–55	4,862	----------	(1)	----------	(1)	----------	(1)
1955–56	5,202	90.93	4,421	(1)	2,135	(1)	1,632
1956–57	5,610	88.45	4,601	57.54	2,544	95.74	2,044
1957–58	6,210	85.76	4,811	55.38	2,548	88.29	2,246
1958–59	6,054	83.37	5,177	52.90	2,545	91.01	2,319
1959–60	5,873	87.58	5,302	55.50	2,873	93.87	2,384

[1] There was no information available.

Source of information: (1) Enrollment by year of classification.—Information provided to the Superior Council on Education by public and private accredited university-level institutions. (2) Holding rates, year to year.—Holding rates refer to the number of students that enroll in a year at university level, in a specific school year, for every hundred students that enrolled in the immediate year of classification in the preceding school year. The percentages in this table were calculated for this study.

Note: Enrollment figures by year of classification do not include the enrollment for 1st and 2d years of the Puerto Rico Junior College, as this institution was not accredited until the year 1956–57. Its inclusion would invalidate the comparability of the data for 1954–55 to 1955–56 with those for 1956–57 to 1959–60.

TABLE 30.—*Kindergarten enrollment in Puerto Rico, school years 1901–2 to 1903–4, 1908–9 to 1911–12, 1915–16 to 1917–18, 1920–21 to 1922–23, 1938–39, and 1962–63 (public day schools and accredited and nonaccredited private schools)*

School year	Enrollment			Total
	Public schools	Private schools		
		Accredited	Non-accredited	
1901–02	351	------	------	351
1902–03	604	------	------	604
1903–04	195	------	------	195
1908–09	395	------	------	395
1909–10	230	------	------	230
1910–11	249	------	------	249
1911–12	268	------	------	268
1915–16	------	388	------	388
1916–17	------	87	------	87
1917–18	------	120	------	120
1920–21	------	49	------	49
1921–22	------	64	------	64
1922–23	------	27	------	27
1930–31	------	459	683	1, 142
1938–39	------	1, 006	------	1, 006
1942–43	------	724	------	724
1943–44	------	1, 072	------	1, 072
1944–45	------	717	------	717
1945–46	------	1, 212	182	1, 394
1946–47	------	1, 274	430	1, 704
1947–48	------	1, 687	416	2, 103
1948–49	------	1, 823	664	2, 487
1949–50	------	2, 034	------	2, 034
1950–51	------	2, 222	------	2, 222
1951–52	------	2, 561	------	2, 561
1952–53	------	3, 014	------	3, 014
1953–54	------	3, 253	583	3, 836
1954–55	------	3, 407	468	3, 875
1955–56	------	3, 251	798	4, 049
1956–57	------	3, 080	887	3, 967
1957–58	------	3, 551	715	4, 266
1958–59	------	3, 828	801	4, 629
1959–60	------	4, 854	597	5, 451
1960–61	288	4, 426	1, 045	5, 759
1961–62	734	4, 879	1, 364	6, 977
1962–63	1, 586	5, 526	1, 699	8, 811

Source of information: Department of Education, Annual reports. The information is included as it appears in the annual reports for the years indicated in the table. All annual reports from 1901 to 1962–63 available in the Library of the Superior Council on Education were examined, but no additional data on this type of school was found.

TABLE 31.—*Kindergarten enrollment in accredited private schools as percentage of the 1st grade enrollment (next school year) in these same schools, school years 1942–43 to 1962–63*

School year	Enrollment in accredited private schools		Kindergarten enrollment as percentage of 1st grade enrollment (next school year)
	Kindergarten	1st grade	
1942–43	724	----------	----------
1943–44	1,072	1,952	37.09
1944–45	717	2,368	45.27
1945–46	1,212	2,534	28.30
1946–47	1,274	2,657	45.62
1947–48	1,687	3,227	39.48
1948–49	1,823	3,673	45.93
1949–50	2,034	3,884	46.94
1950–51	2,222	4,129	49.26
1951–52	2,561	4,401	50.49
1952–53	3,014	5,591	45.81
1953–54	3,253	5,648	53.36
1954–55	3,407	5,527	58.86
1955–56	3,251	5,464	62.35
1956–57	3,080	5,810	55.96
1957–58	3,551	6,290	48.97
1958–59	3,828	6,610	53.72
1959–60	4,854	6,982	54.83
1960–61	4,426	6,945	69.89
1961–62	4,879	7,157	61.84
1962–63	----------	7,827	62.34

Source of information: Enrollment—Department of Education, Statistics Division, annual reports (1942–43 to 1961–62) and bulletin number 2, 1962–63. Percentages were calculated for this study.

TABLE 32.—*Enrollment coefficient*[1] *in public and private kindergartens in Puerto Rico, school years 1942–43 to 1962–63 (according to available data)*

School year	Kindergarten enrollment			Total	Population 5 years of age	Kindergarten enrollment coefficient			Total
	Public schools	Private schools				Public schools	Private schools		
		Accredited	Nonaccredited				Accredited	Nonaccredited	
1942–43	--------	724	----------	724	55,865	--------	1.30	----------	1.30
1943–44	--------	1,072	----------	1,072	57,353	--------	1.87	----------	1.87
1944–45	--------	717	----------	717	58,842	--------	1.22	----------	1.22
1945–46	--------	1,212	182	1,394	60,332	--------	2.01	0.30	2.31
1946–47	--------	1,274	430	1,704	61,820	--------	2.06	0.70	2.76
1947–48	--------	1,687	416	2,103	63,310	--------	2.66	0.66	3.32
1948–49	--------	1,823	664	2,487	64,799	--------	2.81	1.03	3 84
1949–50	--------	2,034	----------	2,034	66,287	--------	3.07	----------	3.07
1950–51	--------	2,222	----------	2,222	67,497	--------	3.29	----------	3.29
1951–52	--------	2,561	----------	2,561	67,086	--------	3.82	----------	3.82
1952–53	--------	3,014	----------	3,014	65,844	--------	4.58	----------	4.58
1953–54	--------	3,253	583	3,836	64,672	--------	5.03	0.90	5.93
1954–55	--------	3,407	468	3,875	64,486	--------	5.28	0.73	6.01
1955–56	--------	3,251	798	4,049	65,109	--------	4.99	1.23	6.22
1956–57	--------	3,080	887	3,967	64,605	--------	4.77	1.37	6.14
1957–58	--------	3,551	715	4,266	64,487	--------	5.51	1.11	6.62
1958–59	--------	3,828	801	4,629	65,172	--------	5.87	1.23	7.10
1959–60	--------	4,854	597	5,461	65,340	--------	7.43	0.93	8.36
1960–61	288	4,426	1,045	5,759	65,963	0.44	6.71	1.58	8.73
1961–62	734	4,879	1,364	6,977	66,833	1.10	7.30	2.04	10.44
1962–63	1,586	5,526	1,699	8,811	65,920	2.41	8.38	2.58	13.37

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[1] Enrollment coefficient: Kindergarten enrollment coefficient refers to enrollment in kindergartens in each school year as percentage of the population of 5-year olds as of July 1 of each year. Coefficient were calculated for this study.

Source of information: Enrollment.—Taken from table 69 of this study. Population.—Bureau of Demographic Statistics, Health Department, population distribution by age, July 1, 1942 to July 1, 1962.

TABLE 33.—*Projections CSE–K–1, –2, and –3—Kindergarten enrollment which would be available, according to several assumptions, to organize a kindergarten program (in public and private accredited schools in Puerto Rico, school years 1963 to 1979–80*

School year	Population 5 years of age (as of July 1 of the school year)	Kindergarten enrollment coefficient used in the projections			Kindergarten enrollment according to the assumptions—Projection		
		Assumption 1	Assumption 2	Assumption 3	CSE–K–1	CSE–K–2	CSE–K–3
1962–63	[1] 65,920	[3] 10.8	[3] 10.8	[3] 10.8	[3] 7,112	[3] 7,112	[3] 7,112
1963–64	[1] 66,075	12.3	12.8	13.3	8,127	8,458	8,788
1964–65	70,120	13.8	14.8	15.8	9,677	10,378	11,079
1965–66	[2] 71,941	15.3	16.8	18.3	11,007	12,086	13,165
1966–67	74,040	16.8	18.8	20.8	12,439	13,920	15,400
1967–68	76,050	18.3	20.8	23.3	13,917	15,818	17,720
1968–69	78,090	19.8	22.8	25.8	15,462	17,805	20,147
1969–70	80,190	21.3	24.8	28.3	17,080	19,887	22,694
1970–71	[2] 82,347	22.8	26.8	31.1	18,775	22,069	25,610
1971–72	84,480	24.3	28.8	33.9	20,529	24,330	28,639
1972–73	86,610	25.8	30.8	36.7	22,345	26,676	31,786
1973–74	88,710	27.3	32.8	39.5	24,218	29,097	35,040
1974–75	90,810	28.8	34.8	42.3	26,153	31,602	38,413
1975–76	[2] 92,832	30.3	36.8	45.3	28,128	34,162	42,053
1976–77	94,800	31.8	38.8	48.3	30,146	36,782	45,788
1977–78	96,690	33.3	40.8	51.5	32,198	39,450	49,795
1978–79	98,490	34.8	42.9	54.7	34,275	42,252	53,874
1979–80	100,170	36.3	45.0	58.0	36,362	45,077	58,099

[1] Bureau of Demographic Registry and Statistics, Health Department of Puerto Rico.

[2] Figures taken from the official population projection by single years of age for the quinquenniums prepared by the Biostatistics Division of the School of Medicine of the University of Puerto Rico.

[3] Real figures taken from table 70 of this study.

Source of information:

1. Population 5 years of age: The number of 5-year-old children was calculated for this study by the method of interpolation, using as the starting point the age groups distribution provided by the official population projection.
2. Kindergarten enrollment coefficient: These coefficients were figured out for this study.
3. Kindergarten enrollment: It was calculated for this study on the following assumptions:

Assumption 1—Projection CSE–K–1: That the coefficient of kindergarten enrollment in public day and private accredited schools increase progressively from 10.8 percent, registered in the school year 1962–63 until it reaches 36.3 percent in the school year 1979–80.

Assumption 2—Projection CSE–K–2: That the coefficient of kindergarten enrollment in public day and private accredited schools increase progressively from 10.8 percent, registered in the school year 1962–63 until it reaches 45 percent in the school year 1979–80.

Assumption 3—Projection CSE–K–3: That the coefficient of kindergarten enrollment in public day and private accredited schools increase progressively from 10.8 percent, registered in the school year 1962–63 until it reaches 58 percent in the school year 1979–80.

TABLE 34.—*Projections CSE-K—Private 1 to 6—Kindergarten enrollment in private accredited schools, according to several assumptions relating the kindergarten enrollment that may be expected in a specific school year with the 1st grade enrollment predicted for the succeeding school year, school years 1962–63, 1964–65, 1969–70, 1974–75, and 1979–80*

First grade enrollment (private accredited schools)			Kindergarten enrollment according to assumptions						
School year	Projection		School year	Projection					
	CSE-EL Private 2	CSE-EL Private 3		CSE-K Private 1	CSE-K Private 2	CSE-K Private 3	CSE-K Private 4	CSE-K Private 5	CSE-K Private 6
1963–64	7,918	7,918	1962–63 [1]	5,526	5,526	5,526	5,526	5,526	5,526
1965–66	8,111	8,294	1964–65	5,678	5,921	6,164	5,806	6,055	6,303
1970–71	8,742	9,920	1969–70	6,119	7,431	8,742	6,944	8,432	9,920
1975–76	9,397	11,192	1974–75	6,578	7,987	9,397	7,834	9,513	11,192
1980–81	10,075	13,018	1979–80	7,053	8,564	10,075	9,113	11,065	13,018

[1] Real figures were taken from table 70 of this study.

Source of information: (1) First grade enrollment: It was taken from table 72 of this study. (2) Kindergarten enrollment: Projections were calculated for this study on the following assumptions applied to the first grade projections CSE-EL Private 2 and 3, respectively:

Assumption 1—Projections CSE-K Private 1 and 4. That kindergarten enrollment in private accredited schools in each school year from 1963–64 to 1979–80 will be equivalent to 70 percent of the 1st grade enrollment predicted for these schools for each school year from 1964–65 to 1980–81.

Assumption 2—Projections CSE-K Private 2 and 5. That kindergarten enrollment in private accredited schools in the school year 1963–64 will be equivalent to predicted for these schools for the school year 1964–65 and that this ratio between the enrollments increase at the rate of 3 percent annually, so that kindergarten enrollment in these schools in the school year 1968–69 will be equivalent to 85 percent of the 1st grade enrollment predicted for them in the school year 1969–70; that from 1969–70 to 1979–80 kindergarten enrollment for private accredited schools will be equivalent to 85 percent of the 1st grade enrollment predicted for these schools for each year from 1970–71 to 1980–81.

Assumption 3—Projections CSE-K Private 3 and 6. That kindergarten enrollment in private accredited schools in the school year 1963–64 will be equivalent to 70 percent of the 1st grade enrollment predicted for these schools for the school year 1964–65 and that this ratio between the enrollments increase at the rate of 6 percent annually so that kindergarten enrollment in these schools in the school year 1968–69 be equal (equivalent to 100 percent) to the 1st grade enrollment predicted for them for the school year 1969–70; that from 1969–70 to 1979–80 the kindergarten enrollment in private accredited schools will be equal (equivalent to 100 percent) to the 1st grade enrollment predicted for these schools for each school year from 1970–71 to 1980–81.

TABLE 35.—*Projections CSE–K–1—Public 1 to 6, CSE–K–2—Public 1 to 6, and CSE–K–3—Public 1 to 6. Kindergarten enrollment in public schools obtained by the process of subtracting the kindergarten enrollment predicted by projections CSE–K—Private 1 to 6 for the private accredited schools from the total kindergarten enrollment predicted by projections CSE–K–1, –2, and –3 for Puerto Rico, school years 1962–63, 1964–65, 1969–70, 1974–75, and 1979–80*

School year	Kindergarten enrollment in public schools according to projections					
	Public 1	Public 2	Public 3	Public 4	Public 5	Public 6
	Projection CSE–K–1					
1962–63 [1]	1,586	1,586	1,586	1,586	1,586	1,586
1964–65	3,999	3,756	3,513	3,871	3,622	3,374
1969–70	10,961	9,649	8,338	10,136	8,648	7,160
1974–75	19,575	18,166	16,756	18,319	16,640	15,222
1979–80	29,309	27,798	26,287	27,249	25,297	23,344
	Projection CSE–K–2					
1962–63 [1]	1,586	1,586	1,586	1,586	1,586	1,586
1964–65	4,700	4,457	4,214	4,572	4,323	4,075
1969–70	13,768	12,456	11,145	12,943	11,455	9,967
1974–75	25,024	23,615	22,205	23,768	22,089	20,410
1979–80	38,024	36,513	35,002	35,964	34,012	32,059
	Projection CSE–K–3					
1962–63 [1]	1,586	1,586	1,586	1,586	1,586	1,586
1964–65	5,401	5,158	4,915	5,273	5,024	4,776
1969–70	16,575	15,263	13,952	15,750	14,262	12,774
1974–75	31,835	30,426	29,016	30,579	28,900	27,221
1979–80	51,046	49,535	48,024	48,986	47,034	45,081

[1] Real figures taken from table 68 of this study.

Source of information: Each series of enrollment projection for the public sector was obtained in the following way: (1) Projections CSE–K–1 Public 1 to 6. This series of projections was obtained subtracting the figures for kindergarten enrollment predicted by each of the projections CSE–K Private 1 to 6 for private accredited schools from the total kindergarten enrollment predicted by projection CSE–K–1. (2) Projections CSE–K–2 Public 1 to 6. This series of projections was obtained subtracting the kindergarten enrollment figures predicted by each of the projection CSE–K Private 1 to 6 for private accredited schools from the total kindergarten enrollment predicted by projection CSE–K–2. (3) Projections CSE–K–3 Public 1 to 6. This series of projections was obtained subtracting the kindergarten enrollment figures predicted by each of the projections CSE–K Private 1 to 6 for private accredited schools from the total kindergarten enrollment predicted by projection CSE–K–3.

TABLE 36.—*High school graduates (public and private accredited schools), applications for admission to the University of Puerto Rico (for 1st year), students admitted to the university, and admitted students that enrolled (in number and percentage). School years 1958–59 to 1964–65*

High school graduates [1]		Applications for admission to the University of Puerto Rico [1]			Students admitted to the university [1]			Admitted students that enrolled [1]			
School year (end of the year)	Number	School year (1st semester)	Number	Percent of high school graduates	Number	Percent of applicants	Percent of high school graduates	Number	Percent of total admitted	Percent of applicants	Percent of high school graduates
1958–59	14,639	1959–60	9,520	65.0	4,260	44.7	29.1	3,495	82.0	36.7	23.9
1959–60	14,394	1960–61	10,010	69.5	4,310	43.1	29.9	3,556	82.5	35.5	24.7
1960–61	15,524	1961–62	11,280	72.7	4,640	41.1	29.9	4,236	91.3	37.6	27.3
1961–62	16,959	1962–63	7,760	45.8	4,000	51.5	23.6	3,621	90.5	46.7	21.4
1962–63	18,191	1963–64	8,660	47.6	4,790	55.3	26.3	4,153	86.7	48.0	22.8
1963–64	20,392	1964–65	11,393	55.9	5,283	46.4	25.9	4,361	82.5	38.3	21.4
Total	100,099		58,623	58.6	27,283	46.5	27.3	23,422	85.8	40.0	23.4

[1] Of every 100 graduates: Applied, 59. Were admitted, 27. Were enrolled, 23.

Source of information: (1) High school graduates from public and private accredited high schools.—Department of Education, Statistics Division. (2) Applications for admission, students admitted to the University of Puerto Rico and admitted students that enrolled.—Planning Office, University of Puerto Rico (table of applications, enrollment authorizations and actual enrollment of students who applied for admission to the University of Puerto Rico during the years 1958–59 to 1964–65, revised on January 5, 1965).

FOOTNOTES

[1] In order to put together this report I have used generously materials from the sources mentioned in the bibliography. The educational system of Puerto Rico in all its levels, is one of the most frequently studied systems anywhere. I have felt it better to bring to light some of the important contributions of so many studies.

[2] "The President's Message on Education". "Higher Education" 19 : 3 ; March 1963.

[3] Luis Muñoz Marín, "Address to the Legislature," Mar. 7, 1956, pp. 4, 8–9, (Mimeographed papers.)

[4] George S. Counts and R. Bruce Raup, "Preface," "Culture and Education in Puerto Rico," Ramón Mellado, p. v.

[5] George S. Counts, "Education and the Progress of America," pp. 23–24.

[6] Theodore Brameld, "The Remaking of a Culture," p. 281.

[7] The Institute of Field Studies, Teachers College, Columbia University, "Public Education and the Future of Puerto Rico," p. 3.

[8] The International Institute of Teachers College, Columbia University, "A Survey of the Public Educational System of Porto Rico," p. 12.

[9] See Daniel J. Boorstin, Polémica sobre Boorstin, Editorial del Departamento de Instrucción Pública, Estado Libre Asociado de Puerto Rico, Serie III-MCMLVI-Núm. CXIV.

[10] Theodore Brameld, op. cit., p. 244.

[11] Logan Wilson, "Higher Education and 1984," "School and Society," p. 93 :344, Oct. 2, 1965.

[12] Melvin M. Tumin and Arnold Feldman, "Social Class and Social Change in Puerto Rico," p. 454.

[13] For suggestions on philosophy of education for Puerto Rico consult, among other sources, the following: (*a*) I. Rodríguez Bou, "Study of the Educational System of Puerto Rico," 1960, (*b*) Ramón Mellado, "Puerto Rico y Occidente; Culture and Education in Puerto Rico," (*c*) Domingo Rosado, "A Philosophical Study To Propose Objectives for Education in Puerto Rico," (*d*) Theodore Brameld, "The Remaking of a Culture," (*e*) José Padín, "American Citizenship and Other Addresses," (*f*) The Institute of Field Studies, Teachers College, Columbia University, "Public Education and the Future of Puerto Rico."

[14] Melvin M. Tumin and Arnold Feldman, op. cit., p. 464.

[15] Ibid.

[16] "Estudio del Sistema Educativo de Puerto Rico," vol. I, pp. 427–431. Informe de la División de Investigaciones Pedagógicas del Consejo Superior de Enseñanza a la Hon. Comisión de Instrucción de la Cámara de Representantes de Puerto Rico.

[17] Antonio Cuesta Mendoza, "Historia de la educación en el Puerto Rico colonial." Vols. 1–2.

[18] This limited system produced men of high caliber such as: José Julián Acosta, Segundo Ruiz Belvis, Francisco Mariano Quiñones, Baldorioty de Castro, Ramón Emeterio Betances, Eugenio María de Hostos, Julio L. Vizcarrondo, Manuel Elzaburu, Alejandro Tapia y Rivera, Rafael María de Labra, and others. Thomás Blanco, "Prontuario histórico de Puerto Rico," pp. 68–71.

[19] Pedro A. Cebollero, "A School Language Policy for Puerto Rico," p. 1.

[20] Pedro A. Cebollero, op. cit., p. 2.

[21] Juan José Osuna, "A History of Education in Puerto Rico," pp. 281–282.

[22] Robert Herndon Fife and Herschel T. Manuel, "The Teaching of English in Puerto Rico," p. 3.

[23] Quoted by Juan José Osuna in "A History of Education in Puerto Rico," p. 342 from 56 Congress, S.D. 363, p. 60.

[24] Pedro A. Cebollero, op. cit., p. 7.

[25] Quoted by Pedro A. Cebollero from Victor S. Clark. "Teachers' Manual for the Public Schools of Porto Rico," p. 70.

[26] Pedro A. Cebollero, op. cit., pp. 7–8.

[27] Years later, Presidents F. D. Roosevelt, Truman, Eisenhower, and Kennedy have expressed views on the final status for Puerto Rico.

[28] Department of Education, "Annual report presented by the Commissioner of Education of Puerto Rico to the Secretary of War," p. 32. 1909–10.

[29] Assimilists.

[30] Separatists.

[31] Juan José Osuna, op. cit., pp. 376–377.

[32] Adrian Hull, "San Juan Review" 2:30–31, June 1965.

[33] Juan José Osuna, op. cit., pp. 392–395.

[34] Harold L. Ickes, letter to Dr. Gallardo from Mar. 31, 1943, quoted by Juan José Osuna in "A History of Education in Puerto Rico," p. 387.

[35] Juan José Osuna, op. cit., pp. 389–391.

[36] Quoted by Luis Muñiz Souffront in "El problema del idioma en Puerto Rico," p. 197, from a speech delivered by Mariano Villaronga at the Annual Meeting of the Teachers Association of Puerto Rico, on Dec. 26, 1946.

[37] Department of Education, *Circular Letter Number 10*, Aug. 6, 1949, p. 1.

[38] This statement is strange since English still has double period, there are more English field assistants and supervisors than those assigned to any other subject including Spanish.

[39] Adrian Hull, "The 'English Problem'," *San Juan Review* 2:30, 31, June 1965.

[40] Cámara de Representantes de Puerto Rico, Comisión de Instrucción, op. cit., vol. I, p. 690.

[41] Department of Education, "Annual Report of the Commissioner of Education," 1940–41, p. 29.

[42] Department of Education, "Annual Report of the Commissioner of Education," 1948–49, p. 24.

[43] International Institute of Teachers College, Columbia University, op. cit., p. 30.

[44] Ibid, p. 108.

[45] Ibid, p. 109.

[46] Robert Herndon Fife and Herschel T. Manuel, op. cit., pp. 311–312.

[47] The Institute of Field Studies, Teachers College, Columbia University, op. cit., p. 429.

[48] The Institute of Field Studies, Teachers College, Columbia University, op. cit., p. 453.

[49] Cámara de Representantes de Puerto Rico, Comisión de Instrucción, op. cit., vol. 2, pp. 1577–78.

[50] Letter from A. B. Hollingshead to Ismael Rodríguez Bou, Jan. 30, 1959.

[51] Adrian Hull, op. cit., pp. 30, 31.

[52] Robert Herndon Fife and Herschel T. Manuel, op. cit., p. 324.

[53] Ibid.

[54] Herschel T. Manuel, "Some Comments on Language in the Schools of Puerto Rico," p. 6. Report submitted to the Commission on Education of the House of Representatives as part of the "Study of the Educational System of Puerto Rico." Feb. 12, 1959 (Mimeographed Report).

[55] Robert H. Fife and Herschel T. Manuel, op. cit., p. 284.

[56] Beresford L. Hayward, "Toward Comprehensive Educational Planning in Puerto Rico," p. 17. Quoted by Ralph B. Long in "The Teaching of English in Puerto Rico," pp. 3–7. July 1959 (Mimeographed Report).

[57] Ralph B. Long, "The Teaching of English in Puerto Rico," pp. 3–7. Report submitted to the Commission on Education of the House of Representatives as part of the "Study of the Educational System of Puerto Rico." July 1959 (Mimeographed report).

[58] Ralph B. Long, op. cit., p. 38.

[59] Robert H. Fife and Herschel T. Manuel, op. cit., p. 331.

[60] Ralph B. Long, op. cit., p. 39.

[61] 56th Cong. S.D. 363. Quoted by Juan José Osuna in "A History of Education in Puerto Rico," p. 20.

[62] Juan José Osuna, op. cit., p. 134.

[63] B. W. Diffie and J. W. Diffie, "Porto Rico: A Broken Pledge," p. 215. Quoted by Pedro A. Cebollero in "A School Language Policy for Puerto Rico," pp. 9–10.

[64] Juan José Osuna, op. cit., p. 194.

[65] Juan José Osuna, op. cit., pp. 202–203.

[66] International Institute of Teachers College, Columbia University: "A Survey of the Public Education System of Puerto Rico," p. 120.

[67] Ismael Rodríguez Bou, "Problems de educación en Puerto Rico," pp. 110–179.

[68] Institute of Field Studies, Teachers College, Columbia University, "Public Education and the Future of Puerto Rico: A Curriculum Survey," p. 470.

[69] Ibid., p. 471.

[70] Institute of Field Studies, Teachers College, Columbia University, "Public Education and the Future of Puerto Rico: A Curriculum Survey," p. 472.

[71] Ramón A. Mellado, "Culture and Education in Puerto Rico," p. 62.

[72] Department of Education, Bureau of Veterans' Education, "Work Plan for the Year 1960–61," p. 1.

[73] Ismael Rodríguez Bou, "Population Growth and Its Implications in Education."

[74] The tables and graphs come from the study on "Projections of School Enrollment for the Educational System of Puerto Rico (1965–80)," Superior Educational Council.

[75] See tables included.

[76] José L. Janer, José L. Vázquez and Nidia R. Morales, "Puerto Rico's Demographic Situation: Some of its Recent Changes and Their Transfer Value," pp. 32–35.

[77] José L. Vázquez Calzada, "La emigración puertorriqueña, ¿solución o problema?" pp. 9–11.

[78] Ibid., p. 12.

[79] José L. Janer, José L. Vázquez and Nidia R. Morales, op. cit., pp. 35–36.

[80] James Russell Bourne and Dorothy Dulles Bourne, "Thirty Years of Change in Ten Selected Areas of Rural Puerto Rico," pp. 21–22.

[81] James Russell Bourne and Dorothy Dulles Bourne, op. cit., pp. 431–432.

[82] Margaret Mead, "The School in American Culture," pp. 33–34.

[83] Malcolm S. Knowles, "The Future of Adult Education," School and Society 90:287, Sept. 22, 1962.

[84] John Kenneth Galbraith, "The Social Balance," The Educational Record 40:185, July 1959.

[85] Ramón Mellado, "Puerto Rico y Occidente," p. 196.

[86] Ramón Mellado, "Puerto Rico y Occidente," pp. 107–8.

[87] James Russell Bourne and Dorothy Dulles Bourne, op. cit., p. 432.

[88] The second unit rural school offers a combination of academic and vocational curriculum to children from the fourth to the ninth grade. The first unit is an academic school from grades one to three.

[89] James Russell Bourne and Dorothy Dulles Bourne, op. cit., p. 26.

[90] James Russell Bourne and Dorothy Dulles Bourne, op. cit., p. 3.

[91] "En Hemisferio Occidental alza en compras hace Isla segundo mejor cliente E.U.," El Mundo, jueves, 17 de septiembre de 1964.

[92] "En Hemisferio Occidental alza en compras hace Isla segundo mejor cliente E.U.," El Mundo, jueves, 17 de septiembre de 1964.

[93] James Russell Bourne and Dorothy Dulles Bourne, op. cit., p. 27.

[94] Antonio Cuesta Mendoza, op. cit., p. 37.

[95] "La asamblea de diciembre" (Editorial), Revista de la Asociación de Maestros de Puerto Rico 6:199, diciembre de 1947.

[96] José Joaquin Rivera, "Foundación, organización y estructura de la Asociación de Maestros de Puerto Rico," p. 11.

[97] "The Commonwealth of Puerto Rico," Washington, D.C., Office of the Commonwealth of Puerto Rico, 1962, pp. 43.

[98] Frank H. Bowles, "Preliminary Report on Certain Aspects of the Study of Institutions of Higher Learning," Report submitted to the Commission on Education of the House of Representatives and part of the Study of the Educational System of Puerto Rico, pp. 4–5. September 1959. (Mimeograph report.)

[99] University of Puerto Rico, Mayagüez Campus, "Bulletin of Information, Agriculture, Art and Sciences, and Engineering," 1964–65, 1965–66, p. 13.

[100] Laws of Puerto Rico, Law No. 135, 1942, pp. 784–786.

[101] Faculty as used here denotes not only the teachers but the operational division usually referred to in the States as a college or a school.

[102] University of Puerto Rico, Mayagüez Campus, Bulletin of Information, Agriculture, Art and Sciences, and Engineering, 1964–65, 1965–66, pp. 14–17.

[103] Laws of Puerto Rico, Act No. 88, Apr. 25, 1949, p. 222.

[104] Ibid., p. 224.

[105] Frank H. Bowles, op. cit., pp. 5–6.

[106] Jaime Benítez, La universidad del futuro, p. 11.

[107] Jaime Benítez, op. cit., p. 17.

[108] Jaime Benítez, op. cit., pp. 19–20.

[109] Jaime Benítez, op. cit., p. 55.

[110] During the year 1964–65 the university had 1,940 members of the faculty of which 580 had doctors degrees (29.9 percent), 1,032 had finished their masters degrees (53.2 percent), 273 had a B.A. degree (14.1 percent), and 55 had degrees conferred by European or Latin American universities (2.8 percent).

[111] Ibid., p. 39.

[112] Jaime Benítez, op. cit., p. 69.

[113] Ibid., p. 59.

[114] No information was available for the other institutions of higher education in Puerto Rico.

[115] Frank H. Bowles, op. cit., p. 143.

[116] Commission on Institutions of Higher Education, Middle States Association of Colleges and Secondary Schools, "A Report on the University of Puerto Rico," pp. 6–12. November 1959. (Mimeographed report.)

[117] Frank H. Bowles, op. cit., pp. 143–156.

[118] Frank H. Bowles, op. cit., pp. 1–3.

[119] Ernest V. Hollis, "Organization for Governing and Administering Higher Education in Puerto Rico." Report submitted to the Commission on Education of the House of Representatives and part of the "Study of the Educational System of Puerto Rico," pp. 16–18. Aug. 4, 1959. (Mimeographed report.)

[120] A Dean of Studies was appointed on Aug. 13, 1959, but in practice, so far, the Chancellor and the Dean of Administration keep on running the institution.

[121] These were transferred by act of the Council on June 19, 1961.

[122] Ernest V. Hollis, op. cit., pp. 30–36.

[123] Ibid., pp. 24–25.

[124] Floyd W. Reeves, "Memorandum on Aspects of the Organization and Administration of the University of Puerto Rico," pp. 23–24, Mar. 25, 1955.

[125] Commission on Institutions of Higher Education, Middle States Association of Colleges and Secondary Schools, op. cit., p. 32.

[126] Ernest V. Hollis, op. cit., p. 38.

[127] "Laws of Puerto Rico Annotated," titles 1 through 4, Historical Documents, Federal Relations, Constitution, ch. 9, department of education, p. 373, 376–377.

[128] Departamento de Instrucción Pública, Programma de Salud, "Informe anual, 1958–59," p. 1.

[129] José Padín, "Where are we going?" p. 15.

[130] José Padín, op. cit., p. 19.